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Abstract

An Evaluation of Thailand's Healthier Choices Nutrient Scoring Algorithm for the Composite Meal Category †

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Abstract: Background: The purpose of nutrient profiling models (NPM) is to evaluate and categorize food products, in order to make it easier for consumers to choose healthier options, to encourage the development of nutritious foods, and to restrict the excessive advertising of products with poor nutritional value. In Thailand, a front-of-package nutrition labeling scheme (FOPNL), known as the "Healthier Choice" symbol (HCL), has been adopted. For composite meal products, the HCL uses a nutrient profiling model (HCL–NPM) to determine which product qualifies as 'healthier' and is allowed to display the HCL symbol. This research aims to assess the convergent validity of this scoring algorithm. Methods: A secondary data analysis, using the Mintel Global New Products Database, was conducted. The nutrient composition of newly launched composite meals marketed in Thailand from 2016 to 2021 was included. An analysis of convergent validity was conducted using the following tests: (1) the Pearson correlation test with the Nutri-Score Nutrient Profiling Model (NS–NPM), Health Star Rating Nutrient Profiling Model (HSR–NPM), and Nutrient-Rich Food Index 6.3 (NRF6.3); (2) the Cohen's kappa coefficient agreement analysis, to identify 'healthier' products with the Nutri-Score FOPNL (NS–FOPNL), Health Star Rating FOPNL (HSR–FOPNL), Chilean Warning Label (CWL–FOPNL), and Choices International (CI–FOPNL). Results: A total of 589 composite meal products were included. The median score of HCL–NPM was 18.0 points (with an interquartile range of 14.0–22.0), and the mean +/− standard deviation score was 18.3+/−5.4 points. The Pearson's correlation coefficient revealed that the HCL–NPM had a moderate negative correlation with the NS–NPM (r = −0.458; 95%CI: −0.520 to −0.391) and with HSR–NPM (r = −0.524; 95%CI: −0.520 to −0.391), while a weak positive correlation was found with NRF6.3 (r = 0.369; 95%CI: 0.297 to 0.436). In the agreement analysis, HCL–FOPNL had a fair pair-wise agreement with CI–FOPNL (κ = 0.335; 95%CI: 0.218 to 0.453), whereas a slight agreement was reported when compared to CWL–FOPNL (κ = 0.187; 95%CI: 0.145 to 0.228), NS–FOPNL (κ = 0.172; 95%CI: 0.132 to 0.211), and HSR–FOPNL (κ = 0.157; 95%CI: 120 to 0.193). Conclusion: The HCL algorithm system could be used to evaluate culture-specific packaged composite meal products in Thailand. It exhibits sufficient correlation and agreement with other international FOPNLs. These results may be helpful in informing improvements to the "Healthier Choice" scheme in Thailand.

Keywords: front-of-package (FOP) label; nutrition labeling; nutrient profiling; food policy; public health nutrition; Thailand

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