Evaluating Children's Preferences for Sustainable Menus in School Canteen

Solinho J.[1,2], Pereira-Pinto, R.[1,2], Mata, F[2]., Vazquez, M.[3], Pinheiro R.[1,2]

[1]School of Technology and Management, Polytechnic Institute of Viana do Castelo, Avenida Atlântico 4900-348 Viana do Castelo, Viana do Castelo, Portugal
[2]Centre for Research and Development in Agrifood Systems and Sustainability (CISAS) of the Polytechnic Institute of Viana do Castelo, Avenida Atlântico 4900-348 Viana do Castelo, Viana do Castelo, Portugal
[3]Department of Analytical Chemistry, Faculty of Veterinary, Campus Terra, University of Santiago de Compostela, 27002 Lugo, Spain

Abstract:

Eating habits established during early childhood have a fundamental impact on the development of eating patterns for children later in life. Fish is a crucial component of a balanced diet, and essential for children's growth and cognitive development. Understanding children's preferences for sustainable meals is essential for promoting healthier and environmentally conscious food choices in schools.

This study evaluated the preferences of primary school children aged 6–10 for two sustainable menu options: pasta cooked with Atlantic bonito and rice cooked with Atlantic bonito. A total of 192 children participated in the consumer test, assessing the frequency of consumption on a scale from 1 (rarely) to 4 (every day). The aim of this study was to identify the most popular main dish in order to consider including it on the school canteen menu, correlating the age of the participants with the frequency of consumption.

We applied a logistic regression analysis using the dependent variable (rice or pasta preference), and 'Age' and 'Frequency' as independent variables. The results revealed that older children with a higher frequency of fish consumption showed a marked preference for pasta cooked with Atlantic bonito compared to rice cooked with Atlantic bonito.

The logistic regression analysis revealed that the likelihood of preferring pasta cooked with Atlantic bonito increased with both the participants' age and their frequency of fish consumption. In contrast, the preference for rice cooked with Atlantic bonito was higher among younger participants, specifically those aged 6-7 years, and was similarly linked to a higher frequency of fish consumption.

These findings highlight the importance of aligning sustainable menu offerings with children's taste preferences to enhance the probability of acceptance and reduce food waste in school canteens.

In conclusion, this study underscores the need to integrate sensory evaluations and consumer testing when designing sustainable menus for children. Additionally, the study emphasizes the role of familiarity in food acceptance, suggesting that educational initiatives promoting fish consumption and sustainability awareness can increase the attraction of these dishes.

Keywords: Children, Atlantic bonito, preferences, consumer test, canteens.