

# Evaluation through Artificial Neural Networks of the sociodemographic Influences on food choices

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**Introduction:** The EATMOT Project is a multinational study that is being carried out in 16 countries about different eating motivations, given their recognized importance in the definition of people's dietary patterns.

**Objective:** This study investigated the influence of sociodemographic factors on some types of eating motivations, specifically: health related factors; economic and availability aspects; emotional determinants; social, cultural and religious influences; marketing and advertising campaigns and finally environmental concerns.

**Methods:** This is a longitudinal observational study carried out on a non-probabilistic sample with 11960 participants. For the analysis of the data were used the T-test for independent

samples or ANOVA with Post-Hoc Tukey HSD, depending on the case. The modelling through artificial neural networks included 7 input variables (sociodemographic characteristics) and 6 output variables (the eating motivations' groups).

**Results:** Variables like age, marital status, country, living environment, level of education or professional area significantly influenced all the types of eating motivations analysed. However, regarding gender, no significant differences were observed for two of the six types of motivations analysed: economic & availability and marketing & commercial. The results of the ANN modelling showed that the strongest positive factors determining the eating motivations were age for health, country for emotional motivations, gender for economic & availability, country for social & cultural, country for environmental & political, and finally country also for the marketing & commercial motivations.

**Conclusions:** These results highlight the importance of the sociodemographic characteristics as determinants for eating patterns around the globe, and particularly the geographic location.

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