

Introduction

Nowadays, consumers' preference for convenience foods puts pressure on all the participants in the food chain both from the point of view of food quality and safety assurance. The aim of this work was to examine to which extent the Romanian consumers understand the efforts of food chain participants to ensure food safety, but also to establish their knowledge on food hazards, awareness on certified labelled food and to identify the sources of information they trust

Methodology

A survey was conducted between December 2018 and April 2019, on 985 private households selected by stratified random sampling based on the regions of Romania that represent the NUTS II-level divisions in the European Union member states, and the education level.

The survey included five sections: food hazard and pathogen recognition, reliability of sources providing food safety information, and consumers' awareness on certified labelled food issued by certification/accreditation bodies for different management systems and demographic questions. The questions were adapted according to the scales reported in literature.

Statistical analysis was performed in terms of descriptive statistics, Chi-square tests, ANOVA, and Exploratory factor analysis (EFA) with SPSS Statistics 20 (IBM Software Group, Chicago, IL). Goodness fit of the model, as well as reliability and validity, were assessed by Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) available with AMOS 20 (IBM Software Group, Chicago, IL).

Results

- Romanian consumers fear of pathogens but half of them do not know that *Listeria*, *Campylobacter*, *Yersinia* and *Clostridium* are food safety hazards (Figure 1).
- Romanian consumers include food additives and GMOs among their food related anxieties and do not see mycotoxins as being hazardous (Figure 1).

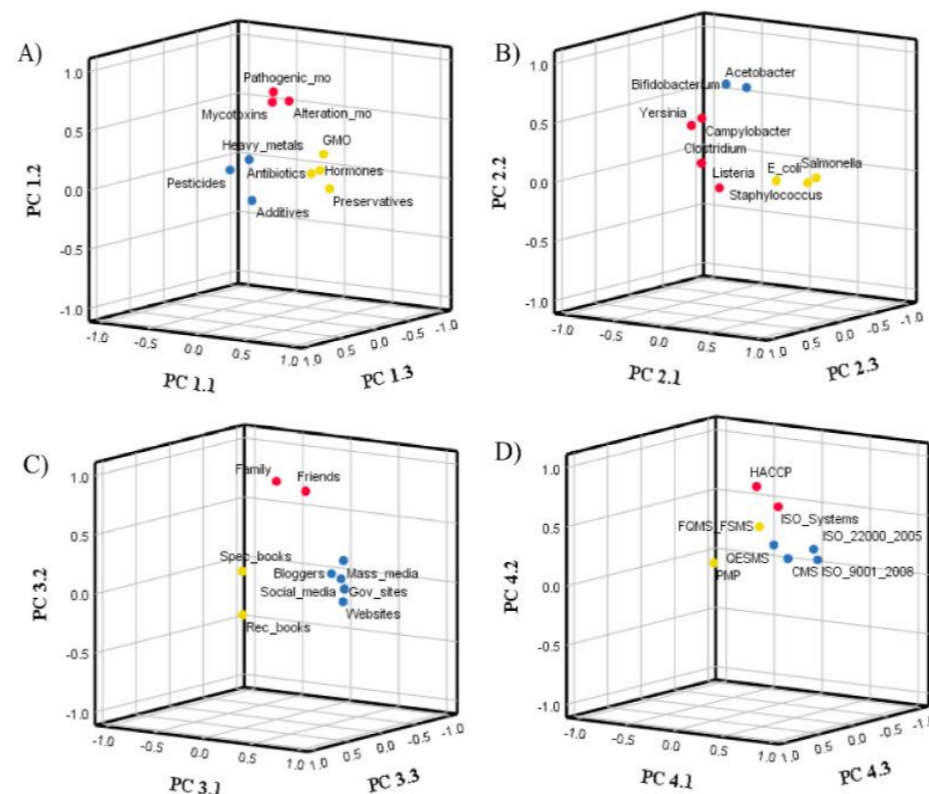


Figure 1. The 3-D plots of the 12 principal components (PCs) and their internal structure resulted from EFA, with Varimax rotation: A) Hazard recognition, B) Microorganisms recognition, C) Reliable food safety information sources, D) Awareness on certified labelled food

- EFA and principal component analysis (PCA) indicated that Romanians are aware of certified labelled food without knowing what they stand for and they trust in science books without necessarily factoring this information in their decision to buy food.

- SEM indicated that higher levels of food safety knowledge along with an improved attitude towards food shopping priorities determine consumers to be more prone to adopt appropriate food safety practices from shopping to consumption (Figure 2).

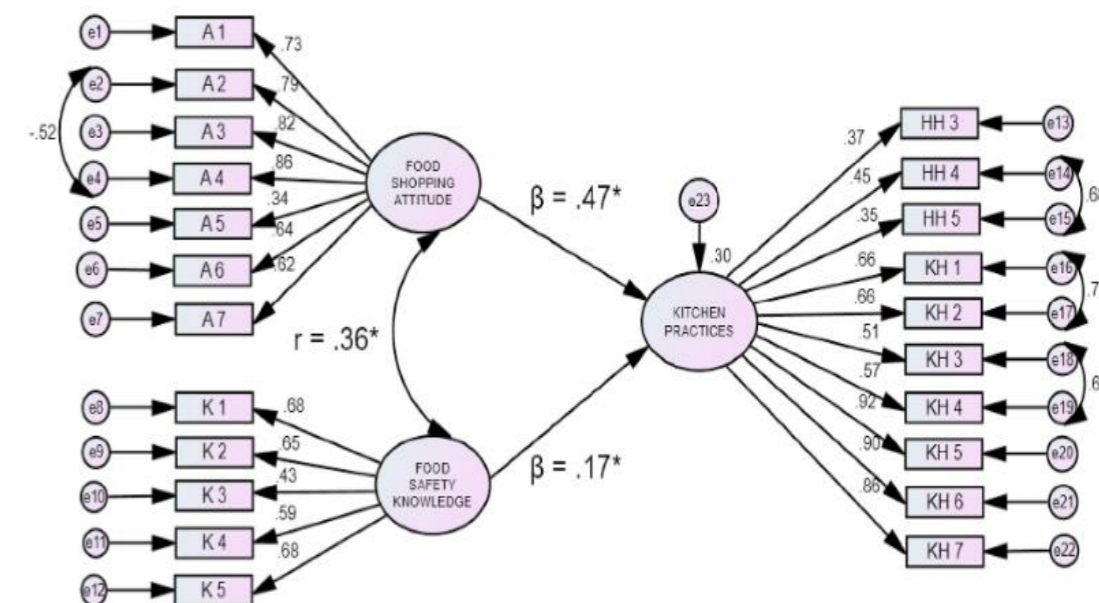


Figure 2. SEM between food safety knowledge, food shopping attitude, and kitchen practices

Conclusions

This survey allowed identification of new communication opportunities for reducing the current food safety knowledge gaps associated to food hazards and to enhance Romanians trust, social media being suggested on the first place.

Literature cited and acknowledgments

Borda, D., Mihalache, A., Dumitrascu, L., Gafitianu, D., Nicolau, A.I. (2021). Romanian consumers' food safety knowledge, awareness on certified labelled food and trust in information sources. *Food Control*, 107544.
Mihalache, A.O., Dumitrascu, L., Nicolau, A.I., Borda, D. (2021). Food safety knowledge, food shopping attitude and safety kitchen practices among Romanian consumers: A structural modelling approach. *Food Control*, 107545.
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