

## Disparities, resemblances and vulnerabilities of the European elderly consumers' food safety practices: a snapshot from a Romanian and Norwegian observational study

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### Introduction

Food safety knowledge, perceptions and attitude of consumers over 65 years old can be influenced by several factors, either specific to the person itself (e.g. housing and living conditions, health and disability) or related to the environment they are living in (working and moving into retirement; pensions, income, and expenditure; social life and opinions).

### Methodology

A comparative study was conducted in 2019 in both rural and urban households belonging to elderly consumers (65+) from Romania and Norway. The observational study focused on evaluation of food safety aspects related to consumers' knowledge, perception and practice.

The research participants were observed and interviewed during shopping and food preparation. Field notes as well as transcriptions from the videos were used to analyse observations (Skuland et al., 2020).

Participants were informed, anonymization was ensured, and consent was obtained both verbally and written prior to the visits. A recruitment agency, Norstat (Norway), was engaged to recruit all the research participants.

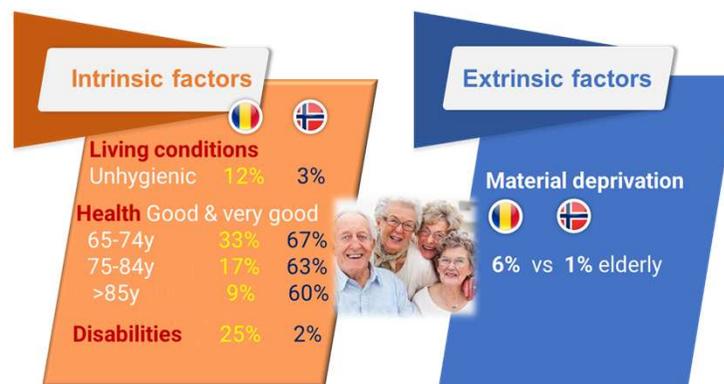
A Multilayer Perceptron method was applied to evaluate the risk of Romanian elderly exposure to foodborne pathogens to unveil the Artificial neuronal architecture using Risk behavior map developed by SafeConsume.

### Results

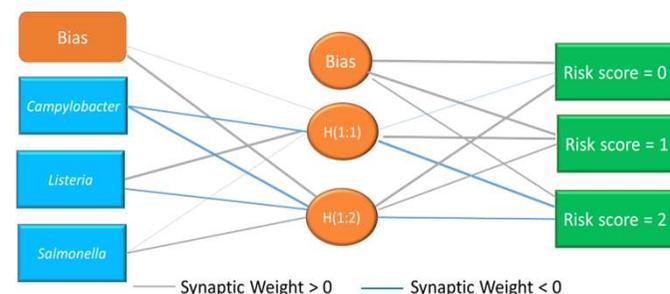
- Romanian and Norwegian elderly population is similar, representing 17.58% and 17.43% respectively, of the total population (Eurostat, 2020).



- However, lifestyle conditions were dissimilar in Romania and Norway (Figure 1), with large disparities observed for the former group.



**Figure 1.** Comparison of intrinsic and extrinsic factors affecting Romanian and Norwegian elderly exposure risk to foodborne pathogens



**Figure 2.** Artificial neuronal network for Romanian elderly exposure risk to foodborne pathogens (IBM SPSS Statistics 20)

- The Artificial neuronal architecture depicted in Figure 2 showed that *Campylobacter* had the highest influence on the risk score seen for both H1:1 and H1:2 layers, while *Listeria* significantly ( $p < 0,05$ ) contributed to H1:2 layer and on the risk score.

### Conclusions

- Both Romanian and Norwegian consumers with wider safety knowledge had a higher interest in food safety and food quality when handling food.
- Decisions of Romanian elderly to switch off the fridge during the winter or of the Norwegian elderly to keep a refrigerator older than 10 years can increase food risk.

### Literature cited and acknowledgments

Ed Skuland SE, Borda, D., Didier, P. et al., 2020, *European food safety: Mapping critical food practices and cultural differences in France, Norway, Portugal, Romania and the UK*. Oslo, Norway: OsloMet, 884, <http://hdl.handle.net/20.500.12199/3112>; Eurostat, 2020

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### Further information

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