

# WEB MONITORING OF ITALIANS' HOME FOOD SAFETY INTEREST AND PERCEPTION: A PRELIMINARY STUDY

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## INTRODUCTION

Household habits significantly affect food safety. Foodborne often resulting from improper food handling by consumers at home (1), are a significant public health issue, though frequently underreported (2). Accurate information on home food safety (HFS) is essential to reduce these risks (3).

The web is the primary source of general information, and for HFS. Assessing knowledge, awareness and practices (KAP) concerning HFS – alongside of online content quality - can help development of effective communication strategies. The project *"Monitoring food safety (FS) knowledges, attitudes and practices (KAP) in home settings to improve the development of digital knowledge dissemination tools, through web analysis"* aims to improve consumer engagement, raise awareness of HFS, and promote safer domestic food practices.

This study seeks to identify and analyse the Italian online landscape concerning HFS using a novel *fingerprint ID* method to categorise web content and gain insights into consumer exposure.

## MATERIALS AND METHODS

### 1 Web Monitoring profile development

Web monitoring was carried out using the Software-as-a-Service platform Extreme WebLive 6.0 over an eight-month period. Four thematic categories were included: general, microbiological, chemical, and nutritional. A validated query was applied to monitor websites, blogs, and social media platforms.



### 2 Selection of Pertinent contents



Content was deemed relevant only if it related to HFS and was written in Italian. Excluded were commercial or promotional content, material intended for Food Business Operators, as well as content on food waste, food security, recipes, or diet plans.

### 3 Fine typing of the pertinent contents

A 'content fingerprint' was developed to characterise the nature and focus of Italian online information. Five *ad hoc* analytical features were defined, each associated with specific descriptive labels. These labels were used to generate a unique profile for each content item via a numerical classification algorithm, **Fingerprint ID**, based on a 25-bit resolution. This enabled fine-grained typing of individual web content.

#### FEATURES LABELS

##### CONTEXT

- Hygiene and Cleaning
- Food Consumption
- Cooking and Preparation
- Labelling and Supply Chain
- Storage

##### SOURCE

- Food Safety Professional
- Topical or Current Events
- Contains Authoritative References
- Authoritative/Institutional

##### TYPE OF INFORMATION

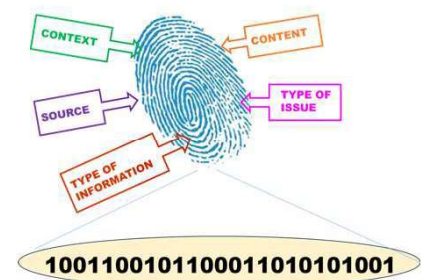
- Ambiguous
- False
- Complete
- Lacking

##### TYPE OF ISSUE

- Pathologies
- Eating Habits
- Nutritional
- Chemical
- Microbiological
- General

##### CONTENT

- HFS season related
- Opinions
- Popular/Outreach
- Recall or Alert
- Scientific



## RESULTS AND DISCUSSION

Combining feature labels assigned to each web content item produces complex data that is difficult to analyse. Converting these features into numerical values simplifies the dataset, making it easier to distinguish and analyse different content combinations. Here, 'typing' refers to categorising content by identifying distinct profiles rather than simple classification. From 4,881 relevant items, 422 unique profiles were generated. Full dataset analysis is still ongoing.

## REFERENCES

- 1) Redmond EC, Griffith CJ. Consumer food handling in the home: a review of food safety studies. J Food Prot. 2003 Jan;66(1):130-61. doi: 10.4315/0362-028x-66.1.130.
- 2) EFSA and ECDC (European Food Safety Authority and European Centre for Disease Prevention and Control), (2023). The European Union One Health 2022 Zoonoses Report. EFSA Journal, 21(12), e8442. <https://doi.org/10.2903/j.efsa.2023.8442>
- 3) Sivaramalingam B. et al; Scoping Review of Research on the Effectiveness of Food-Safety Education Interventions Directed at Consumers; Foodborne Pathog Dis. 2015 Jul;12(7):561-70. doi: 10.1089/fpd.2014.1927