



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

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PLOTINA Final Conference
BOOK OF ABSTRACTS



Funded by the
Horizon 2020 programme
of the European Union

Project coordinator: Alma Mater Studiorum - Università di Bologna

PLOTINA has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement (G.A NO666008).

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ISBN 9788854970168

Inclusion of the sex/gender variables in sensory analysis of meat products: state-of-art.

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Aims of the contribution (poster)

The aim of this study was to analyze and evaluate the inclusion of sex and gender variables in the sensory analysis of meat products.

Introduction

Meat and meat products are among the most consumed foods in the world. Consumers' opinion is a good guide to improve meat products' quality and it is important to carry out sensory consumer tests so that they can express their preferences. Background, demographic aspects and attitude of consumers influence how they perceive meat products. However, the use of untrained consumers for assessing meat quality may produce responses that are unreliable or invalid. Sensory evaluation based on direct impressions is considered a reference method and an invaluable measurement tool in food quality assessment. If applied correctly, sensory science is a powerful tool, as it provides measures no other instrument (to date) can provide: a detailed description of how a food item is perceived by the human senses and/or how much this item is liked (Mörlein, 2019). For these reasons, it is very important that the panel, the fundamental instrument of sensory analysis, is structured correctly. Some fundamental aspects to consider for the formation of a panel are the sex and gender of its components and their age, as well as, in a second instance, the level of education. It is very important that the gender and sex of the judges is as balanced as possible, so as to obtain statistically valid data. In fact, it is well known that gender can affect food appetite, affective reaction, perception and selection. Different studies report that men have tendencies to rate sweeter foods higher, probably because women tend to care more about healthiness of food products (Michon et al., 2010). However, regarding comfort foods, women mostly choose snack foods, whereas men usually prefer hot meals (steak, soups, etc.) (Wansink et al., 2003). On the other hand, it has been shown that women are more prone than men to taste new or novel foods (Beardsworth et al., 2002), even though they are more inclined to have food rejections (Nordin et al., 2004). Other studies suggested that gender differences may be due to men focusing more on any information they receive about the product rather than in their senses and the actual sensation they experience, as women seem to actually do (Schifferstein, 2006). It is thus clear that there are relevant differences between males and females when expressing food preferences.

By analyzing the literature of the past few years, it is possible to notice how very few works dealing with meat products take into consideration the sex and gender variables in the formation of a trained panel or during the execution of consumer tests.

Materials and methods

The Web of Science Core Collection (WOS) platform from Clarivate Analytics, Scopus from Elsevier and Google Scholar from Google were the databases selected. The following terms were used in the search strategy: Title and Abstract: ((meat products OR meat) AND (sensory analysis) AND (gender)). The search was carried out using title and abstract fields only, in order to increase the accuracy. The search was mainly limited to the last fifteen years, even though important and relevant earlier publications were also taken into consideration.

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Results

By entering meat products and sensory analysis as keywords, 1517 documents came out. When the word gender was added to the keywords, there were only 12 documents, which represent just 0.79% of the whole search, the oldest being from 2004 and the newest from 2019. Of these 12 papers, only 10 have a part concerning sensory analysis and, out of these 10, only 7 use panels made up of judges of different sex. These papers analyze different meat products: meat in general (n=4, 0.26%), sheep meat (1 paper, 0.07%), pork meat (1 paper, 0.07%) and traditional meat products (n=1, 0.07%). Only 0.46% of papers take into consideration the gender variables to form the panel.

Conclusions

From this survey, it is evident that less than 1% of the papers published on sensory analysis of meat products actually include the sex/gender variables in the formation of a trained panel or during the execution of consumer tests. A great deal of relevant information about the effect of gender on consumers' food preferences is not being collected. A greater effort should be done towards the inclusion of the sex/gender variables in this research field, as it could be useful for meat product formulation and development to further characterize and improve food preferences.

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Acknowledgements

The authors thank "PLOTINA, Promoting gender balance and inclusion in research, innovation and training" project, which has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement (G.A. No. 666008). The views and opinions expressed in this publication are the sole responsibility of the author and do not necessarily reflect the views of the European Commission.