

Awareness of Irradiated Food Consumption between Brazil and Argentina

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1. Introduction

In 2023, a experiment was conducted to validate the Awareness Scale on Consumption of Irradiated Foods (ASCIF) instrument for the Argentine population. The general objective of this study was to compare the responses of Argentinians and Brazilians to the Awareness Scale on Consumption of Irradiated Foods (ASCIF).

2. Methodology

The group was made up of Argentinian men and women from different social classes and levels of education, from the province of Buenos Aires. The instrument was applied online to these groups between October 25, 2023 and December 7, 2023, and the total number of respondents was 500.

3. Results and Discussion

A total of 500 Argentine consumers (51% women, 49% men) were involved in the study to validate the scale. 28.4% were aged between 30 and 39, 47.8% said they had a university degree and an average family income of 2 to 5 minimum wages, equivalent to 900 to 2,250 dollars a month (24%).

It can be seen that for both the Argentine and Brazilian populations, the highest score was obtained on question 16 (Q16. I consider it necessary to carry out educational campaigns to inform the population about the irradiation of food), with values of 3.88 (0.04) and 4.59 (0.03) respectively, indicating values between agree and strongly agree on the likert scale.



The manuscript shows the results for the Paired Samples t Test. The 31 ASCIF questions were compared for the Argentine and Brazilian populations.

Questions Q9 (I would consume irradiated food), Q10 (I would be willing to pay more for irradiated food), Q23 (I would buy irradiated food because I know this process does not make the food radioactive), Q24 (Irradiated food is microbiologically safe), Q25 (Irradiated foods are nutritional safe), Q27 (I consider that irradiated foods are not harmful to health in the short term) and Q31 (The World Health Organization (WHO) and the United Nations (FAO) recommend the irradiation of food) showed $p > 0.05$, so according to the null hypothesis, means are statistically equal.

When the factors S, C, L and A are tested, the $p\text{-value} < 0.05$ indicates that there is a statistically significant difference between the means of the Argentinian and Brazilian groups.

4. Conclusions

Analysis of the results revealed that the majority of Argentinian and Brazilian consumers are unaware of the benefits of irradiated foods. The comparison between the two cultures showed comparable results with similarities between the questions and factors analyzed.

References

Rusin T, Araújo WMC, Faiad C, Vital HC. Construction and validation of a psychometric scale to measure awareness on consumption of irradiated foods. PLOS ONE. (2017).
Hair JF, Anderson RE, Tatham RL, Black WC. Análise Multivariada de Dados. 6a. Ed. Porto Alegre: Bookman. (2009).