Contribution ID: 243 Type: Poster

An Empirical Network Analysis of the Carnism Structure based on the 4N Scale: Spanish and English Versions

Thursday 24 July 2025 17:10 (20 minutes)

Poster

An Empirical Network Analysis of the Carnism Structure based on the 4N Scale: Spanish and English Versions

Author

Claudia Suárez-Yera, María Sánchez-Castelló, Orlando Dumitru Costin, Andrés Soler-Martínez, and Antonio J. Rojas Tejada.

Affiliation

University of Almeria

Abstract

Carnism is an ideology that justifies meat consumption using arguments known as the three Ns: eating meat is Natural, Necessary, and Normal. Subsequently, the "Nice" argument was added to these Ns since it was found in the literature that "eating meat is pleasant" was one of the main motives people feel motivated to give reason for and maintain their meat consumption. To measure this ideology, the 4N Scale was developed to measure Carnism. Our research team has conducted recent work based on factor analysis to identify the best theoretical framework for measuring Carnism's 4Ns. In this context, the 4N Scale showed improvement when using an alternative 3N (natural, necessary, and nice) framework, even compared to the 3N's original approach (natural, necessary, and normal). The rationale behind the alternative 3Ns approach arose from the concern about the methodological problems encountered in different studies in the Normal dimension, and the high factual content in the wording of the items belonging to this subscale. The present study aimed to analyze the structure of the Ns in the Spanish and English versions of the 4N Scale using empirical networks. The analysis focused on testing the network structure when the four initial dimensions (natural, necessary, normal, and nice) or the three dimensions alternatively proposed by the authors are introduced (natural, necessary, and nice), for the Spanish and English scale versions. The sample consisted of 265 Scottish and 272 Spanish participants. Data collection was carried out in parallel. Participants, who completed an online questionnaire, were obtained by convenience sampling. The analyses were performed by EBICglasso estimation and exploratory graphical analysis, to detect the number of substructures within the network. Centrality measures were considered to estimate the relative position of the items within the network. The resulting networks with the 4Ns in the Spanish and English versions were similar, but neither formed a unique structure for the Normal dimension. However, when the alternative 3N framework was used, the resulting networks formed distinct structures for each N in both versions. These results corroborate the findings of our team using factor analysis and imply further evidence that the best dimensional configuration for measuring carnism is composed of natural, necessary, and nice dimensions, since the Normal dimension does not contribute to the measurement of carnism as presented so far.

Keywords

Carnism, 4N Scale, Psychometric Networks

Primary authors: MAYORAL LÓPEZ, Javier (University of Almería); Ms SUÁREZ-YERA, Claudia (University of Almería); Ms SÁNCHEZ-CASTELLÓ, María (University of Almería); Mr DUMITRU COSTIN, Orlando (University of Almería); Mr J. ROJAS TEJADA, Antonio (University of Almería)

Presenters: MAYORAL LÓPEZ, Javier (University of Almería); Ms SUÁREZ-YERA, Claudia (University of Almería); Ms SÁNCHEZ-CASTELLÓ, María (University of Almería); Mr DUMITRU COSTIN, Orlando (University of Almería); Mr J. ROJAS TEJADA, Antonio (University of Almería)

Session Classification: Poster Session 4

Track Classification: Measurement: Measurement