

Measuring the purchase intention of Irish consumers towards phosphate-reduced processed meat products using extended Theory of Planned Behaviour

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Introduction: Globally, meat and meat products have been a part of the human diet for centuries and have been an essential source of proteins, amino acids, vitamins and minerals. However, there is increased consumer concern about the negative health impacts associated with high levels of consumption of processed meat products due to the sodium, fat, and synthetic additives used [1]. There is also increased consumer demand for clean-labelled, high-quality meat products. These consumers' perceptions and needs could significantly influence their consumption and purchase intention towards processed meat products. Phosphates are one of the synthetic additives used in processed meat products to improve water holding capacity, texture and flavour. However, excessive consumption of phosphates is harmful to people with chronic kidney disorders [2]. This, in turn, has indicated to the meat industries the need to reduce/remove the phosphates used in processed meat products. However, this reduction of phosphates in processed meat products could decrease product quality across a number of attributes. Therefore, it is essential to measure the consumers' interest in purchasing and consuming phosphate-reduced products, which may potentially result in products of different quality. Thus, this study focuses on determining the Irish consumers' purchase intention toward phosphate-reduced processed meat products by conducting an online-survey based on the extended Theory of Planned Behaviour (TPB).

Methods and materials: TPB, developed by Ajzen [3], is widely used to study human social behaviour, including purchasing and healthy eating behavioural intentions. The questionnaire used in this survey was developed using the TPB comprising the constructs, namely, attitude, subjective norm, perceived behavioural control (PBC), and intention. In addition, a perceived health risks (PHR) construct was added to the model to attain a better understanding of consumer behaviour in the context of phosphates. Therefore, this study tested five hypotheses (H_{n=5}) that attitude (H₁), subjective norm (H₂), PBC (H₃), PHR (H₄) and intention (H₅) play a significant role in consumers' purchase intention towards phosphate-reduced processed meat products. A total of 548 Irish adults (≥18 years) from across the Republic of Ireland (ROI) participated in the survey, which was conducted using an external data collection agency. The questionnaire comprised three sections consisting of (i) sociodemographic questions (age, gender, level of education, occupation, family income, etc.), (ii) assessment of consumers' knowledge of meat additives and phosphates in processed meat products, and (iii) a set of questions measuring the TPB constructs. The attitude was measured using four statements, while the other constructs were measured using three statements, rated with a 7-point unipolar scale. The internal consistency of the TPB constructs data was validated with Cronbach's alpha, and the hypotheses were validated using multiple linear regression.

Results and discussions: The modified TPB model produced a predictive capacity of adjusted R²= 0.46 that accounted for a reasonably good fit with 46% of the total variance explained, showing consumers had positive intent to purchase phosphate-reduced processed meat products. The multiple regression analysis showed that attitude, subjective norm and PHR had a significant positive impact on the consumers' purchase intention toward phosphate-reduced processed meat products. However, the PBC did not significantly affect consumers' purchase intention toward phosphate-reduced processed meat products, indicating that PBC does not mediate any attention to consumers' preferences. These results thus provide insights that can be used to increase consumer likelihood of purchasing such products. Overall, the results obtained from this model verified that the extended TPB model has good explanatory power and was efficient in measuring the consumers' intention to purchase processed meat products containing reduced amounts of phosphate additives.

Conclusions: Using the extended TPB model, the survey study successfully predicted that consumers have positive purchase intention toward phosphate-reduced processed meat products.

References:

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