



Development of Emotion Lexicons for Consumers' Taster Status to Describe Sugar-Free Chocolate

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Abstract

Introduction: More than half of all South Africans are overweight, possibly caused by excessive sugar consumption. Consumers' emotional response has been connected to their sensory experience of sugared products, determining food preference. Few studies have looked at how consumers' different taster status (non-, medium- and super tasters) influence their emotions when consuming sugar-free products. Therefore, this research aims to develop emotional lexicons (using the EmoSensory wheel terms) to describe sugar-free chocolate according to consumers' taster status.

Methodology: This quantitative study made use of a cross-sectional survey design and a non-probability convenience sampling method. The study population consisted out of South African adult consumers (n = 153). For data collection, each respondent received two sugar-free chocolate samples (milk and dark chocolate) for tasting and an e-mail containing the link to an electronic questionnaire (consisted out of 5 sections). Ethical approval was obtained and statistical analysis was performed.

Results and Discussion: The respondents are mainly female (76%) between the ages of 18 – 29 (54.9%) years. Respondents are classified into three taster status groups with almost an equal distribution between non-tasters (38.6%), medium tasters (39.9%) and supertasters (21.5%). The majority of respondents like dark chocolate (mean = 4.09) more than milk chocolate (mean = 3.95). However, more than half of the non-taster group select positive emotions for the milk chocolate, while the medium tasters' group, choose more positive emotions for the dark chocolate. Most of the respondents in the super taster group (increased sensitivity to bitter taste) indicate the highest selection of negative emotions for dark chocolate. These findings indicate that for different sugar-free chocolates, different emotional lexicons are needed for each taster status group.

Conclusion: This study highlighted the significance of developing different emotional lexicons for consumers with different taster status – this confirms the existence of different consumer segments. These emotion lexicons will contribute to future research on the sensory acceptability and behaviour of chocolates and sugar-free products for the South African market.

Biography: **Annchen Mielmann**

Annchen Mielmann obtained her Ph.D. Food Sciences (2014) from the University of the Free State. From 2008 she lectures food modules at the School of Physiology, Nutrition and Consumer Sciences. In 2017 she received the Swiss Government Excellence Scholarship for postdoctoral studies at the Bern University

of Applied Sciences in Switzerland. In 2019 she received an Y2 rating from the National Research Foundation (NRF). She is a member of the South African Association of Family Ecology and Consumer Sciences (SAAFECS), The South African Association for Food Science and Technology (SAAFoST) and South African Association of Dairy Technology (SASDT). Her research falls under the research unit, African Unit for Transdisciplinary Health (AUTHeR). She focuses on the link between food, sensory research and consumer behaviour to provide a composite mosaic of scientists' current understanding of sensory qualities and the global consumers' food choices.