

ADAPTATION OF THE FOOD CHOICE QUESTIONNAIRE - DIGITALIZATION OF THE WORD ASSOCIATION METHOD

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Introduction

In the last decade, bread consumption shows a decreasing tendency in Hungary (from 44.5 kg/capita to 34.4 kg/capita between 2010 and 2018). Our aim is to identify and explore the factors influencing the consumption of bread and bakery products, including whole grain breads, using the Food Choice Questionnaire (FCQ).

FCQ is frequently used in international research to explore factors (e.g., price, ingredients, packaging, etc.) influencing the purchase of different food products. The adapted version of the FCQ for breads and other bakery products is not yet available in Hungarian. According to the literature, word association (WA) and triangulation methods are used in the adaptation process.

Due to the epidemic situation, the WA method could not be performed offline, therefore we developed an online word association application presenting six different photos of breads. This was completed by 193 participants. Responses were then analysed using a triangulation technique, in which the associations of the participants were categorized by professionals, first individually and then by consensus. Based on these categories, the FCQ can be modified.

In the current study we present the implementation and the results of the digitalized WA method and its use in the adaptation process of the FCQ.

Conclusions

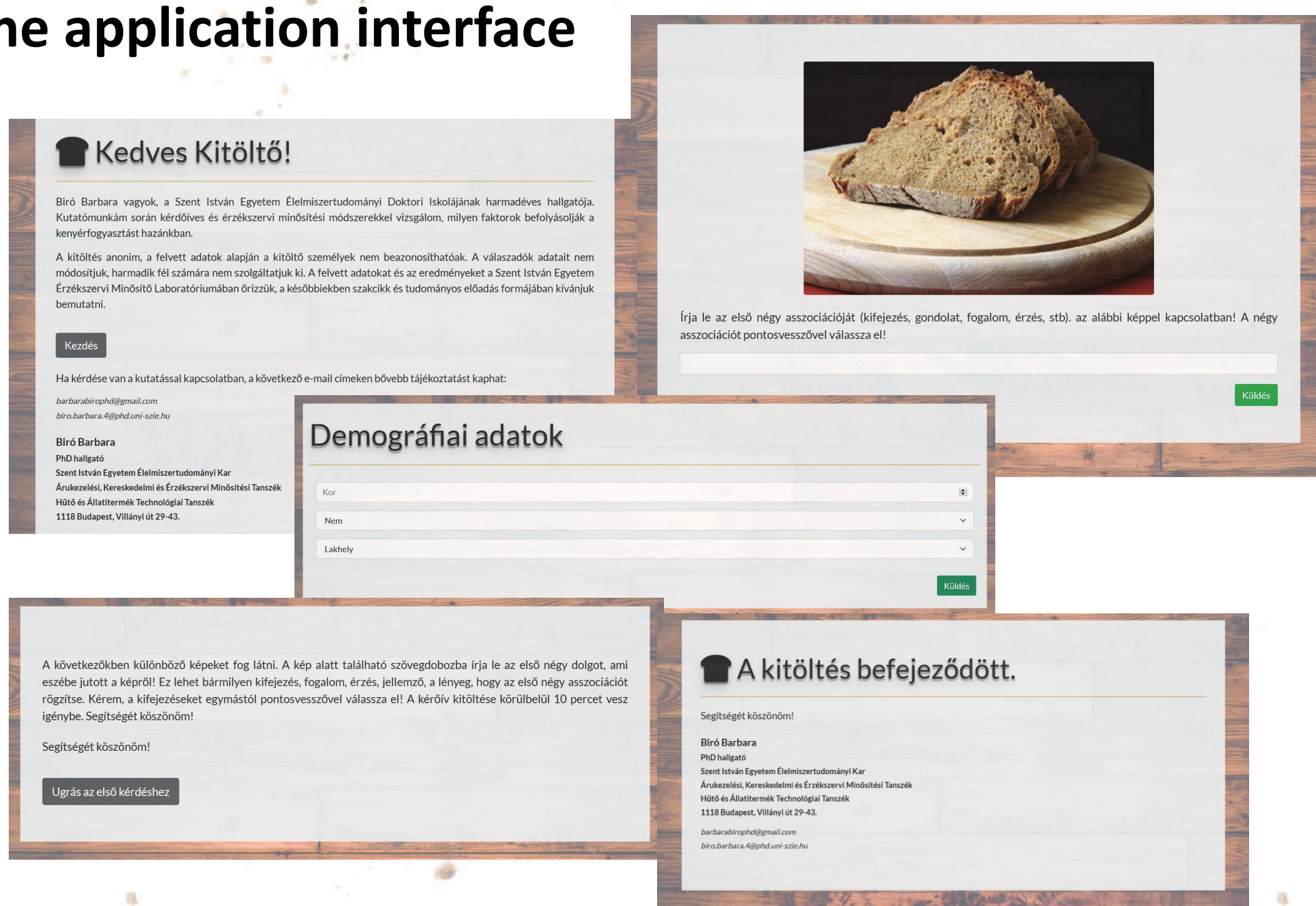
With the successful digitalization of the Word Association method, we carried out a methodological development that allows us to easily and simply perform similar tests even after the epidemic situation is over, since in our accelerated world, consumers are more easily accessible online.

Results

The six stimuli



The application interface



Methods

Based on Linh and co-workers, 2019

The Word association method (Ares & Deliza, 2010)

- 100+ participants required, performed offline
- Presentation of pictures, descriptions, phrases related to the topic
- Respondents will have 30 seconds to describe the first 3-4 terms, associations, emotions, etc. that come to their minds about the stimulus

The development of the online Word Association application

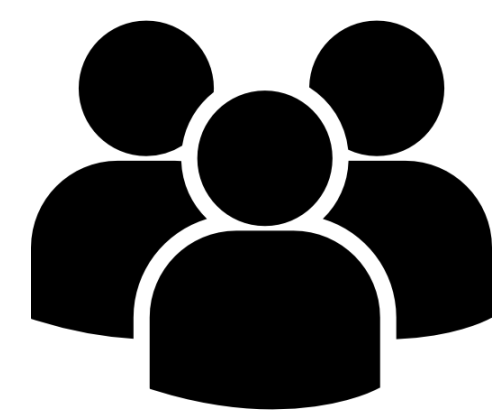
- Six different photos of breads, one minute response time per picture
- The code was written in Java (54.4 %), HTML (42.3 %), CSS (2.9 %), JavaScript (0.4 %) programming languages
- The recorded data were extracted in .xlsx and .json file formats
- The language of the interface: Hungarian
- The application was also optimized for mobile devices

Triangulation method

- The terms described by respondents are categorised individually by experts
- Three experts categorise the terms on a consensus basis
- Modifying the "traditional" FCQ: new categories can be added and deleted

Participants

- Students of MATE, SOTE
- Recruited Facebook and e-mail
- **193 respondents**
- **37 males, 156 females**
 - Gender ratio: 19.17% - 80.83%
- Average age: 29.91±8.92 years
 - Min: 18 years, max: 66 years old
- **55,96% lives in the capital (Budapest)**

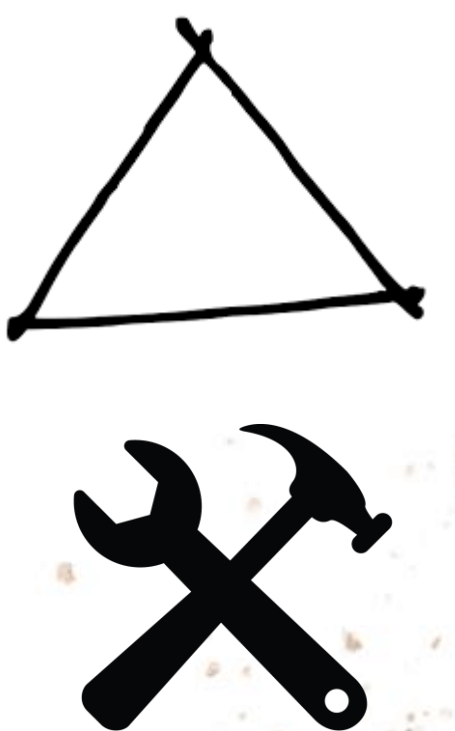


More than 4500 terms in total

- **Sensory characteristics:** tasty, soft, brown, white, crispy
- **Health and nutrients:** healthy, unhealthy, fattening, fibrous, gluten
- **Quality and origin:** fresh, homemade, quick drying, home, store
- Other terms related to **bread type, mood, memories**

Triangulation method – The final FCQ

- A total of **691 different terms** have been categorized
- **11** of the original 36 terms were **deleted**, **3** were **modified** and **7** new terms were added to the questionnaire
- The adapted questionnaire now consists of **33 terms**



References

Ares, G.; Jaeger, S.R. *Check-all-that-apply (CATA) questions with consumers in practice: Experimental considerations and impact on outcome*; Woodhead Publishing Limited, 2015; ISBN 9781782422587.
Linh, L.T.; Ai, V.D.; Dzung, N.H.; Tam, L.M. Assessing consumer behaviour towards fish sauce products figure by using food choice questionnaire. 2019; 57, 87–96.

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