

Development and validation of a smartphone app to measure Food Choice Motives of Urban Kenyan consumers – Results of the ENRICH study

Ireen Raaijmakers, Harriëtte Snoek, Jos van den Puttelaar, Vincent Linderhof, Theogene Habumugisha, Francis Odhiambo, Alida Melse-Boonstra, Karin Borgonjen-van den Berg, Imelda Mueni, Stepha McMullin, Ralph Roothaert, Zahra Kassam, Michelle Wanjiru, Jeanne HM de Vries, Ruerd Ruben



Background

- Dietary patterns are rapidly changing in urban areas in developing countries. Generating insights into the underlying drivers for food choices provide valuable entry points for the development of interventions, innovations, and policies aiming to improve healthy food consumption.
- Food Choice Motives (FCM)¹ are the consumers' motives, reasons or motivations for choosing or eating foods.
- As current mobile technical developments provide the opportunity to collect data in a relatively fast, easy, flexible, and convenient manner we developed a smartphone app for measuring FCM (see Figure 1).

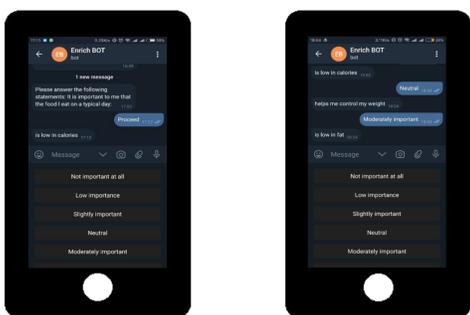


Figure 1. Screenshots of the ENRICH app measuring FCM motives

Objective

The overall objective of the ENRICH project was to develop and validate a smartphone app that collects data on fruit and vegetable intake and related motives. Specific aims were:

- To assess the FCM of urban Kenyan consumers
- To check the applicability of measuring FCM with a smartphone app
- To compare the app-based outcomes with the traditional FCM tool

Methods

- Focus on fruit and vegetable consumption in urban Kenya
- Three different settlements (Dandora, Buruburu and Kilimani) were included to cover the different socio-economic classes in Nairobi
- Figure 2 shows the study design
- Study population:
 - Traditional FCM tool: N=289
 - ENRICH app: N=117, from who N=32 completed data was available
- High dropout in data collected with the ENRICH app: due to low responses, incomplete answers and difficulties in linking data at individual level

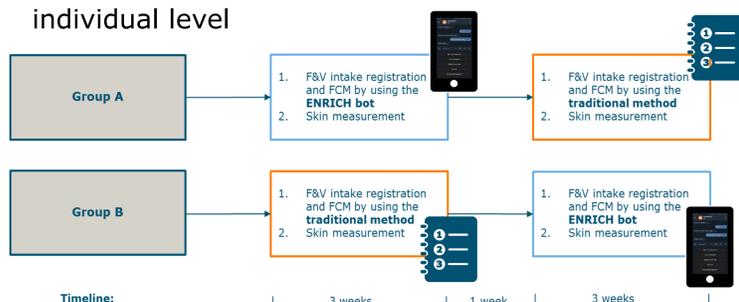


Figure 2. Overview study design

References

¹Stepoe, A., Pollard, T.M. and Wardle, J., 1995. Development of a measure of the motives underlying the selection of food: the food choice questionnaire. *Appetite*, 25(3), pp.267-284.

Results

Urban Kenyan consumers have different FCM (Figure 3)

- 12 different motives were identified (using the traditional tool)
- In general, 'Food safety' is considered the most important food choice motive. 'Ethical concern' is considered least important.



Figure 3. Identified FCM

Importance of FCM differ across the settlements (Figure 4)

- Compared to the other settlements, the high-income settlement Kilimani attached the greatest importance to the convenience-related motives.
- 'Food safety' and 'Health' are considered less important for the low-income settlement Dandora compared to the other settlements.

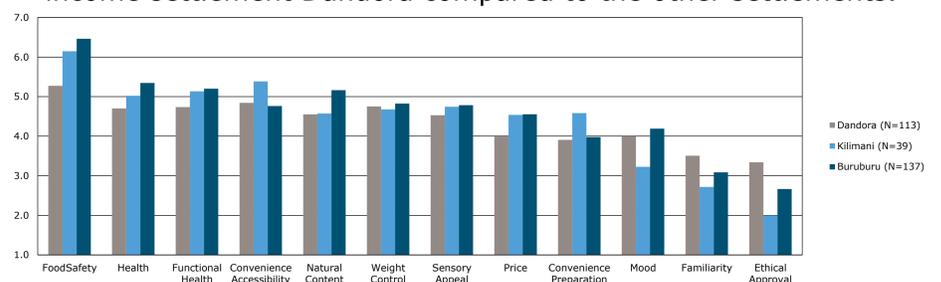


Figure 4. FCM and settlements (1='Not important at all' to 7= 'Extremely important')

Correlations were found between the ENRICH app and traditional measures of FCM (Figure 5).

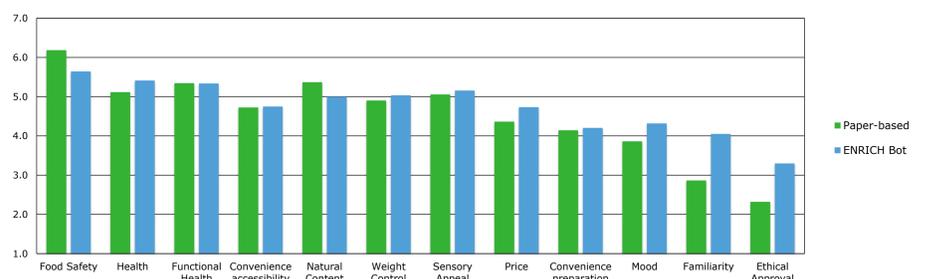


Figure 5. Correlations FCM between ENRICH app and traditional FCM tool (1='Not important at all' to 7= 'Extremely important')

Conclusions

- First insights suggest that FCM can be measured with a smartphone app
- High dropout rates should be taken into account

Acknowledgements

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