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Enhancing dietary assessment in Nigeria using myfood24: a pilot study of diets among Nigerian adults

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With the rising rates of non-communicable diseases in Nigeria, there is need to understand the links between diet and health using an accurate and efficient dietary assessment method. The new online dietary assessment tool comprising a database of local Nigerian and West African diets, myfood24 West Africa (1), was piloted in a healthy adult population in Nigeria.

Participants were staff of Michael Okpara University of Agriculture Umudike, Abia State in southeast Nigeria, at least 18 years, not pregnant, not had childbirth in the last 3 months, and not diagnosed with diabetes. A pre-recorded video demonstration of food recording with myfood24 was sent to participants. One-day 24-hour recall was self-recorded by either participants or by the researcher on behalf of the participants. Participants who used myfood24 on their own completed the usability questionnaire to rate their agreement with system usability statements and provided feedback on the system.

179 adults were recruited for the study and a total of 1345 food/drink entries were made with a median number of 7 (IQR: 5, 9) food/drink entry per day per participant. Foods from our new West African food database contributed to 60-82% of the energy and nutrient intake. Mean energy intake was 1844 (SD 781) kcal; with energy coming from 28% fat, 63% CHO, and 9% protein. 53 (30%) participants used myfood24 on their own, with a mean age of 38.5 ± 8.7 years. There was no significant difference in the energy intake (p = 0.67) and body mass index (p = 0.82) of participants who used myfood24 on their own and those who did not. 39 out of 53 participants completed the user questionnaire. The mean system usability score was 74 (95% CI 65, 83), indicating a good usability. Participants found the tool easy to use and estimate portion sizes of local foods; it was educative showing levels of macronutrient consumed; and more efficient than manual recording of foods but some participants commented that a few local foods were missing.

myfood24 will support research investigation of relationships between diets and health in Nigeria. There is also now an offline function removing reliance on WiFi. Feedback from participants will inform future updates of the database.

Reference

1. Uzokwe CA, Ebenso BE, Williams G *et al* (2023) *Proc Nutr Soc* **82**(OCE5), E279.