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Subjective feedback from the EatWellUK-2 study: Insights for personalised nutrition apps

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Poor dietary habits are associated with the development of non-communicable diseases⁽¹⁾. Most strategies implemented to enhance population diet quality follow a “one-size-fits-all” standardised approach, often neglecting individual preferences and requirements. Evidence suggests that personalised nutrition (PN) advice, tailored to an individual, can improve dietary intakes⁽²⁾. This research investigates participants’ subjective feedback from the EatWellUK-2 randomised control trial that compared PN advice versus general dietary guidance, both delivered via eNutri, a web app, developed at the University of Reading. eNutri delivers automated food-based nutrition advice tailored to the user based on their dietary intake recorded by a food frequency questionnaire (FFQ)⁽³⁾.

Participants were disease-free UK adults (>18y) who were randomised to the PN or control group. Participants completed the eNutri FFQ, then automatically received via the app either advice tailored to their dietary intake (PN group) or general population advice based on the UK’s Eatwell Guide (control). Following a 12-week intervention, the FFQ was repeated and participants completed a feedback questionnaire containing open-text and Likert questions assessing agreement with statements (strongly disagree, disagree, neutral, agree and strongly agree). MannWhitney U tests compared the mean ranks between the PN and control groups for each question. Data are presented as percentages of participants who felt positively about each statement based on “agreed” plus “strongly agreed” responses. The study received ethical approval from the University of Reading Research Ethics Committee (08/19) and was registered at ClinicalTrials.gov (NCT03897972).

Participants (90% female) had a mean (SD) age of 46 (15) y and BMI of 25.8 (6.1) kg/m². When asked about the advice received, the responses of the PN group (n = 54) were more positive that “it encouraged me to eat healthily, even if only for short time” (p = 0.045, PN 55.6% vs control 41.8%) and “it was clear what changes I needed to make to improve my diet” (p = 0.011, PN 73.6% vs C 51.8%). When asked to provide an “app review” of eNutri, the control group (n = 55) described their advice as “too general” and “readily available elsewhere”, while the PN group said it contained “varied and realistic examples”, and the advice was “very clear”, “helpful” in relation to choosing “better foods to eat” and allowed people to “assess your own goals”.

Participant feedback favoured PN over general population advice as it provided encouragement and clarity about which dietary changes would benefit each individual. Together with the quantitative results from the EatWellUK-2 study, which are still being analysed, these findings will help to assess eNutri’s potential as a useful tool to encourage UK adults to adopt healthier dietary behaviours.

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