



## Baseline characteristics of the Food4Me Proof of Principle Study: a web-based randomised controlled trial of personalised nutrition in seven European countries

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Interest in web-based nutrition and lifestyle research is growing but there is little information on the profile of the European population interested in personalised nutrition (PN) delivered via the Internet. The Food4Me Proof of Principle Study is the largest pan-European web-based intervention trial designed to investigate the effectiveness of PN on health-related behavioural change. This study aimed to describe the baseline characteristics of the European population recruited into a web-based PN intervention trial.

Potential participants from 7 European countries (Ireland, Germany, Greece, Spain, Poland, the Netherlands and the UK) were recruited via the Internet to emulate a web-based PN service. This was aided by local and national advertising of the project through the Internet, radio advertisements, posters, e-flyers, the use of social media and by word of mouth. Data on socio-demographic characteristics, health profiles, anthropometrics (weight, height and waist circumference) and lifestyle factors were self-reported via the Internet.

A total of 5,561 volunteers (mean age 40.1 years; 63.0% female; 47.1% overweight or obese) were screened of whom 1,609 fulfilled the inclusion criteria and were recruited to the study. The recruited participants had a mean age of 39.8 years (range 18–79 years), 60.9% ( $n = 980$ ) were female and 96.7% ( $n = 1556$ ) were from a white-European background. The mean BMI for all randomised participants was  $25.5 \text{ kg.m}^{-2}$  and 44.8% ( $n = 721$ ) of the participants had a BMI  $\geq 25.0 \text{ kg.m}^{-2}$ . 24.5% ( $n = 394$ ) of the participants had a waist circumference of  $\geq 88 \text{ cm}$  for women and  $\geq 102 \text{ cm}$  for men. 31% ( $n = 499$ ) participants were at least moderately active at work and 67.8% ( $n = 1,091$ ) were at least moderately active during leisure time respectively. Furthermore, 12.1% ( $n = 195$ ) were current smokers.

The present results confirm that women are more likely to volunteer to participate in nutrition-related studies including those delivered via the web<sup>(1)</sup>. Our results show that those interested in PN are broadly representative of the adult population and are not skewed towards either already very healthy people (the “worried well”) or those wishing to lose weight. Just under half (46.3%) of participants had BMI  $\geq 25.0 \text{ kg.m}^{-2}$  and 32.1% were physically inactive individuals which is in line with the prevalence of these characteristics in European adults<sup>(2,3)</sup>. This study shows that the profile of the European population interested in web-delivered PN is similar to that of the adult population most of whom would benefit from improving diet and other lifestyle behaviours.

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1. Kodama S, Saito K, Tanaka S *et al.* (2012) *Int J Obes (Lond)*, 36, 675–685.
2. Hallal PC, Andersen LB, Bull FC, *et al.* (2012) *Lancet*, 380, 247–57.
3. Eurostat. (2011) Overweight and obesity – BMI statistics.