

Personalised nutrition perceived positively by consumers

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Researchers of the Food4Me project have published findings about a consumer focus-group study to identify motivating factors toward personalised nutrition, which is the practice of designing better, healthier and more individualised diets. The team's research, published in peer-reviewed journal *Appetite*, showed that consumers perceive personalised nutrition to benefit their health and fitness. Positive drivers for acceptance included convenience and a payment-based system. But, consumers were concerned about protection of their health data, and trust in regulators and personalised nutrition service providers.

The [World Health Organization estimates](#) that about 80% of premature heart disease cases, strokes, type 2 diabetes, and 40% of cancers could be avoided with improved lifestyle choices, such as diet related ones. A potential strategy to reduce these disease risks may be personalised nutrition that takes into account genetic differences between individuals, including how certain genes affect the risk of diet-related diseases – part of nutrigenomic science. The goal of the Food4Me project, with funding from the European Commission, is to explore European public concepts of personalised nutrition, and to identify the best delivery methods of information and services.

Food4me researchers from 11 different universities and institutes performed a pan-European study of consumer attitudes and opinions from a small sample of 126 people in Germany, Greece, Ireland, the Netherlands, Poland, Portugal, Spain and the UK.

To ensure a consistent research approach across all countries, a standard focus-group protocol was developed. To begin, two focus groups were conducted in each country. Each focus group comprised 6 to 10 participants, living in cities, of both sexes and various work occupations. In each national centre, one group was made up of 18 to 65 year olds, and another group comprised 30 to 65 year olds. Individuals that self-declared themselves unhealthy or individuals with a background in nutrigenomics were excluded from the study.

Research questions explored participants' opinions and understanding towards personalised nutrition. Participants were then asked to do three different types of medical tests: In scenario one, participants were asked about their lifestyle choices, such as being asked to comment on a scenario of an online provider that would improve their health by asking questions in order to change their diet. In scenario two, phenotypic data were collected with a home kit that measured an individual's hip and waist, and collected blood with a finger-prick test. Finally, in scenario three, genomic data were collected using information from previous samples, with the addition of DNA data collected from participants' saliva.

Data analysis showed participants were intuitively aware of the perceived benefits of personalised nutrition over generalised nutritional advice. This data enabled three categories of personalised nutrition user to be classified according to their motivations. The first was 'health management' – for example,



people that try weight reduction strategies to improve their health or ease symptoms of pre-existing health conditions.

The second group, 'personal appearance', were users aiming to aesthetically change their body shape via weight gain or weight loss. The third group, 'athletic performance', comprised competitive individuals who did marathon running or cycling.

A lack of will power was highlighted as a motivational barrier to personalised nutrition. One participant in Greece said, "you can arrange your life accordingly, but it takes a lot of will power to do that."

Consumers positively favoured personalised nutrition. Negative perceptions related to storage of personal data, especially whether consumer genetic information is anonymised, and trustworthiness in the expertise of those that hold this information. For example, consumers were worried that their data could be lost or misused if it fell into the wrong hands. There was also scepticism in the ability of postal services to reliably deliver biological samples.

There was less evidence that participants would choose to practise personalised nutrition themselves, because they believed it applied to people at greater health risk. This may prove to be a barrier to improve public health, unless messaging is framed appropriately.

Alleviation of public concerns about trust may come from health professionals, because participants were more comfortable dealing with people not motivated by financial gain, particularly those working in the public sector. Consumers prefer face-to-face contact of these health professionals and support to overcome difficulties faced during personalised nutrition medical tests. Payment of services is perceived to boost quality of information, and use of the internet is another convenient incentive.

A limitation of this research is that the mixed focus-group approach fails to assess potential impacts that education may have on knowledge and perceptions of personalised nutrition. This will be addressed later in Food4Me research, as well as a focus on cross-cultural and demographic causes of specific attitudes, and how much people are willing to pay for services.

In summary, Europeans generally understand the health benefits of personalised nutrition science, but are concerned about management of data and individual privacy. Another strong risk perception factor is the 'optimistic bias', by which a person believes they are less likely to experience negative events, and more likely to experience positive ones, than their peers. The researchers suggest communication should target those who may potentially benefit from personalised nutrition, but who do not perceive that it will benefit them, such as younger consumers or people without existing medical conditions. Communication should be framed around benefits, convenience and an individual's lifestyle preferences and food choices.

For further information:

[Stewart-Knox B, Kuznesof S, Robinson J, et al. \(2013\). Factors influencing European consumer uptake of personalised nutrition. Results of a qualitative analysis. *Appetite* 66: 67-74.](#)