

PhD Project Advertisement

Project title: Improving iodine intake in adults following a plant-based diet – a mixed methods study

Project Number: FBS2024-098-Bath-sq

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Co-supervisors:

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Dr Benjamin Gardner, University of Surrey

Project description:

Plant-based diets may increase the risk of iodine deficiency, especially in the UK, as the main dietary sources are animal-based (dairy provides 33% of adult intake), and there is no salt-iodisation programme. This is a concern as even mild-to-moderate deficiency in pregnancy is associated with lower IQ in children.

We know that currently, most milk-alternative products on the market are not fortified with iodine (just 28% compared to 88% fortified with calcium¹). Whether a consumer chooses an iodine-fortified milk-alternative product may, in part, depend on their awareness about iodine, and also whether they know that cows' milk is a good source of iodine. However, we do not know the current level of iodine-awareness among those who follow a mostly plant-based diet. Furthermore, everyday consumer habits may affect intake of dietary sources of iodine and may lead to the selection of non-fortified milk-alternative products, which would further increase deficiency risk.

It is not known whether iodine intake from dietary sources could be improved through an intervention that would increase knowledge and awareness, and this is particularly relevant for those following a mostly plant-based diet, where the risk of iodine deficiency is greatest.

This PhD project will use both qualitative and quantitative methods (i.e. a mixed-method design) to (i) evaluate attitudes and habits related to iodine in consumers of plant-based milk alternatives, and (ii) evaluate whether knowledge and behaviour change interventions can improve iodine intake and status in this group. In addition to a systematic review of the current evidence, the student will conduct three main studies (Figure 1):

1. A qualitative study to evaluate attitudes, awareness and dietary habits relevant to iodine intake in adults who use plant-based alternatives. The student will use qualitative methods (one-to-one interviews) to understand attitudes and health beliefs around milk and plant-based alternatives.
2. A quantitative study to evaluate iodine knowledge, iodine intake and status in UK consumers of plant-based alternative products.
3. A randomised controlled trial to evaluate the impact of a knowledge intervention on iodine intake in plant-based consumers. The student will conduct process and outcome evaluation of the intervention, assessing change in the iodine knowledge, intake and status over a 6-month follow up period.

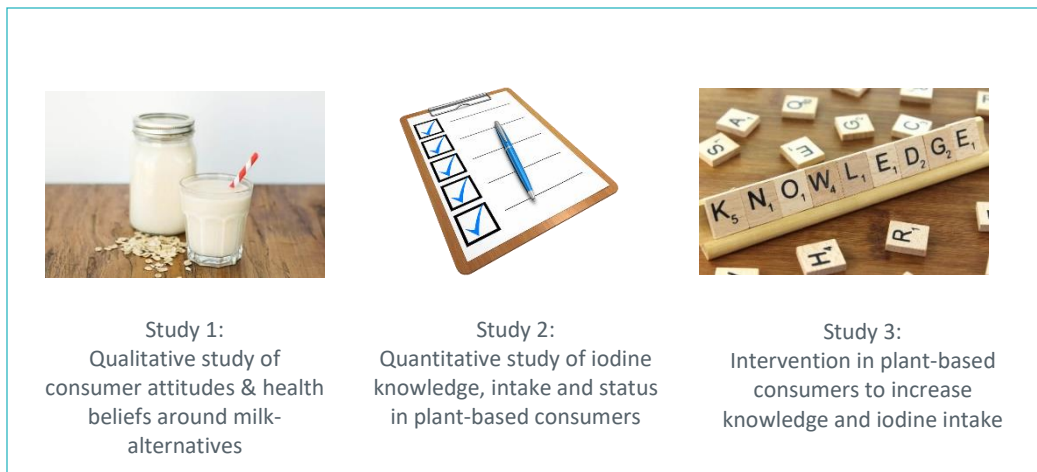


Figure 1: Overview of the main PhD projects

Training opportunities:

The student will receive training in a wide range of skills, including systematic review of the literature, qualitative research methods (interviews, transcription and analysis), dietary analysis, data analysis, laboratory analysis (of urine samples). Depending on background of the student, a number of training courses are available at the University of Surrey and Queen's University Belfast that the student can attend to develop their skills and knowledge. The student will also be working in a multi-disciplinary team and will have training opportunities through the contacts of the supervisory team.

Student profile:

The student should have an upper second-class level (or equivalent) BSc honours degree in nutrition, food science, or a closely related subject. The student should have an interest in health psychology and behaviour change. The student should have laboratory and statistical analysis skills, though training will also be provided. The student should have a good attention to detail and a methodical approach.

Stipend (Salary):

FoodBioSystems DTP students receive an annual tax free stipend (salary) that is paid in instalments throughout the year. For 2023/24 this is £18,622 and it will increase slightly each year at rate set by UKRI.

Equality Diversity and Inclusion:

The FoodBioSystems DTP is committed to equality, diversity and inclusion (EDI), to building a doctoral researcher(DR) and staff body that reflects the diversity of society, and to encourage applications from under-represented and disadvantaged groups. Our actions to promote diversity and inclusion are detailed on the [FoodBioSystems DTP website](#).

In accordance with UKRI guidelines, our studentships are offered on a part time basis in addition to full time registration. The minimum registration is 50% FT and the studentship end date will be extended to reflect the part-time registration.

For up to date information on funding eligibility, studentship rates and part time registration, please visit the [FoodBioSystems website](#).

References

Nicol K, Thomas EL, Nugent AP, Woodside JV, Hart KH, Bath SC (2023) Iodine fortification of plant-based dairy and fish alternatives: the effect of substitution on iodine intake based on a market survey in the UK. *Br J Nutr* 129, 832-842.