

## PhD Project Advertisement

**Project title:** IEat: Integrating eating behaviour and food choice behaviour into sustainable habits for healthy children

**Project No:** FBS2024-037-Methven-rq

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### Project description:

IEat: Integrating eating behaviour and food choice behaviour into sustainable habits for healthy children

Are you passionate about food and health, interested in eating behaviour, food choice and nutrition, and enjoy working with children? If so this could be the right PhD for you.

It is widely known repeated exposure of children to foods can reduce food neophobia and increase liking and intake of those foods. Humans need carbohydrates and protein, so have an innate preference for sweet and savoury foods. However, we have to “grow to like” foods that are sour and bitter, and indeed many vegetables are bitter. It can be the same with texture, we have to learn to like harder textures. We are diverse in the way we perceive foods too, some people are more bitter sensitive or more texture sensitive, and we chew things differently. However, our previous research shows that repeated exposure still works regardless of taste sensitivity; so bitter sensitive children still learn to like bitter vegetables.

However, if exposure were the only answer to sustainable habits for healthy children, then government initiatives such as Universal Free School Meals for all children to year 2, and the School Fruit and Veg Scheme (SFVS), would have led to widespread increase in fruit, vegetable and fibre intake and reduction in obesity. Unfortunately, that has not happened; 23% of year 6 children in the UK were obese and 14% overweight in 2021/22.

We propose that achieving sustainable habits for healthy children needs integration of eating behaviour and broader food choice behaviour research. Where psychobiology demonstrates that repeated exposure leads to an increase in intake, this is only after accepting initial food rejection and food waste, something many families cannot afford to do. So designing robust interventions that address both eating and food choice behaviours could provide the evidence needed for more impactful public policy.

The hypothesis we propose is that integrating eating behaviour with food choice behaviour research will enable sustainable habits to be realised, leading to an increase in health of UK children.

### Objectives:

The first objective of this PhD will be to collate learnings from eating behaviour and food choice research that has focused on children, and co-create integrated solutions with children, parents and primary schools. The individual hypotheses that will be tested may include:

**H1:** Regularly increasing the variety of vegetables and vegetable formats provided to children at school, coupled with a community wide intervention to support uptake of vegetables beyond school, will lead to an increase in children's vegetable and fibre intake.

**H2:** Using a wide variety of vegetable types and formats over a prolonged period will increase liking and intake in children regardless of food neophobia, taste and texture sensitivity.

**H3:** Rapidly consumed softer texture foods will lead to reduced satiety in children and increased subsequent intake, regardless of differences in texture preferences and oral processing.

**H4:** Increasing the textural differences in regularly consumed foods, co-created with parents, children and schools, will lead to an increase in post-meal satiety.

To investigate these hypotheses we propose a range of objectives including two intervention studies. Objective 1 to review literature highlighting potential areas for integrated approaches. Objective 2 to carry out focus groups with children, schools and parents to co-create integrated interventions.

The third objective is the first intervention study to address vegetable intake. It is likely to involve questionnaires and sensory sensitivity tests; followed by a food meals exposure study in school coupled with community intervention (e.g. Cooking/Recipe workshops), and biomarker measurements of intake (hair/urine samples).

The second intervention (objective 4) is likely to focus on food texture. For example, this may involve an acute intervention study comparing regularly consumed meal types matched in macronutrients but varying in texture. The necessity to collect oral processing data (measurements of chewing) as well measures of appetite (breath analysis for gastric emptying, ad libitum intake at subsequent meal) is why it is likely to be an acute study.

The supervisory team will support in the writing of your research papers from the two interventions, and as a final objective we would aim for a report bringing together all of your findings into a summary for policy stakeholders, so that the impact of your work can lead to real change.

#### **Training opportunities:**

As a doctoral researcher on this project you will have training from the supervisory team and their wider research groups in all aspects of the experimental work; writing ethics, designing and implementing studies in schools, co-creating with communities, measuring sensory sensitivity to taste and mouthfeel, sampling for biomarkers, analysis of samples by LCMS, designing and implementing acute appetite studies. You will also gain broader experience in school meals provision through our contacts from the Genius School Food Network network, and through our contacts in school meal providers.

#### **Student profile:**

This PhD is ideal for someone passionate about food and health, interested in eating behaviour, food choice and nutrition, and that enjoys working with children. It is a multi-disciplinary project and there are many degree disciplines that are relevant. We welcome applications from people from a wide range of backgrounds and different lived experiences with an interest in nutrition, food choice and children.

#### **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](#).**