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Introduction

The purpose of scientific research in the field of medicine is to improve human health. Such research generally begins in the lab and must then be *translated* into medical practice (“bench to bedside”). However, we feel that a missing component to this is the effective translation of the understanding of this research to the people whom it is for. Engaging schools – teachers and students with the research happening in their city is one way to help translate this research.



Background

- The World Health Organisation projects that by 2021, in the UK alone, almost 5 million people will die from a chronic disease such as heart disease, diabetes, osteoporosis, and some cancers¹.
- Recent research has highlighted the importance of lifestyle choices at an early age, not only on the future health of the individuals, but also on the health of their future children²⁻⁴.
- This unique project comprises a module of work involving curriculum-linked lessons delivered in school before and after a visit to LifeLab Southampton for an activity day.
- There is an increasing recognition of the role of health literacy in enabling people to exert greater control over their health and the factors that shape health⁵.



LifeLab Southampton is an innovative, cross-community educational intervention which aims to show adolescents first hand how their diets and lifestyles lay the foundations for a healthier life, and how their own health is linked to the health of the children they may have in the future.

By engaging children with the science that shows how lifestyle choices at an early age can affect health and future children’s health, we hope to empower them to make healthier choices and reduce their risk of developing chronic diseases later in life.

Proposed Project

Eight teachers will be selected for involvement.

They will attend a research seminar day where research scientists will present their work.

Teachers will then decide on a focus for their curriculum work. During the following months, the teachers will develop a teaching sequence, with resources.

The module of work will be taught and will include a day visit at LifeLab.

Evaluations of attitudinal changes in students, and teachers’ experience of translational research and curriculum design will be carried out.

Aims

For teachers

1. To integrate contemporary science and health research findings and methodology into KS3 curriculum.
2. To provide professional development in translational research and curriculum design.
3. To produce KS3 teaching resources based on translational research.
4. To pilot and evaluate novel ways for teachers to work with scientists.

For students

5. To engage students with state of the art research that is conducted in their city and hospital, with a focus on understanding how their early life affects their later health and the health of their future children.
6. To encourage students to consider careers in science and health-related disciplines.
7. To evaluate attitudinal changes in students undergoing the LifeLab experience as part of this project



Pilot Project

An initial pilot study has already demonstrated positive changes in student attitudes to health, to science and to science careers



How have LifeLab activities have influenced students’ views?

After attending the LifeLab activities which were linked by a common theme, namely “how lifestyle choices could impact on their future health and the health of any future children, students demonstrated a significantly improved awareness that nutrition during early development can affect future health, and that lifestyles of both parents can affect the health of their children . We have shown that attending LifeLab has a statistically significant positive impact on students’ interest in pursuing science beyond GCSE (see figure 1).

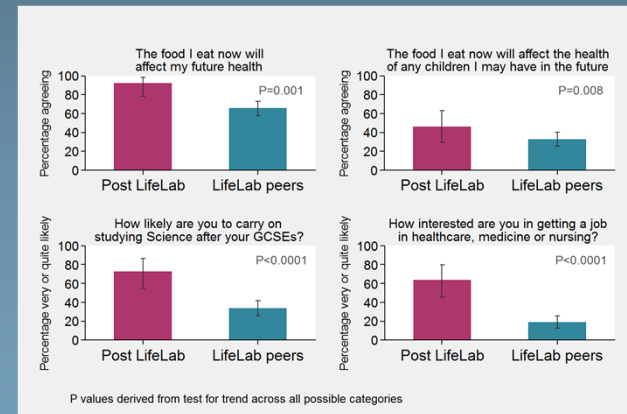


Figure 1

The potential to engage teachers and their students in this idea of translational research gives this project a truly unique and innovative focus.

References: ¹ http://www.who.int/chp/chronic_disease_report/media/uk.pdf
²Godfrey, K. M. et al (2010). *Trends in Endocrinology & Metabolism*, 21(4), 199-205,
³Robinson et al (2006) *Eur J Clin Nutr*, 58(8), 1174-1180, ⁴Lawrence et al (2009) *Psychol Health*, 9, 1003-1020, ⁵Tang et al (2009) *Health Promot Int.*, 1, 68-77.