

Impact case study (REF3b)

Institution: University of Worcester
Unit of Assessment: 4 Psychology, Psychiatry and Neuroscience
Title of case study: Enhancing the evidence base for child health interventions
<p>1. Summary of the impact</p> <p>Childhood obesity is an increasing problem in the UK with roughly one in seven school aged children in Scotland and England being classified as obese. The picture is similar in Wales where the prevalence is one in eight. The direct cost of obesity to the NHS is estimated to be £4.2bn a year, with this set to rise if the causes of childhood obesity are not addressed. The contribution of the research described below to tackling this issue is manifold: it has enabled the development and improvement of child health interventions/programmes; it has allowed commissioners and programme leads to make more informed decisions about investment in these interventions/programmes; and it has contributed to the development of regional healthy weight strategies and national guidelines on weight management.</p>
<p>2. Underpinning research</p> <p>The research has been an on-going series of studies since 2005 led by Professor Dominic Upton (2005-present) and Dr Penney Upton (2007-present), with colleagues from the Psychological Sciences (PS) Unit and the wider University (e.g. Dr Victoria Mason (2007-2012), Haydn Jarrett (2001-present), Professor Derek Peters (2001-present), Charlotte Taylor (2009-present), Justine Bold (2008-present) and Dr Rosie Erol (2010-present)). On the basis of previous health psychology outputs and successfully completed evaluations, the research team was commissioned to undertake two research studies.</p> <p><i>Regional evaluation of weight-management programmes for children and families</i></p> <p>Family based weight-management programmes (commissioned by Primary Care Trusts (PCTs) through NHS or Department of Health West Midlands (DOHWM)) have been developed in response to the increasing prevalence of childhood obesity in the region. These programmes, however, have not been systematically evaluated resulting in a lack of robust evidence regarding their effectiveness. A study conducted from March-December 2009, examined the benefits on health and behaviour change to children and families involved in 7 distinct weight-management programmes (Reference 1). This evaluation, commissioned by DOHWM (Grant a), represented the first application of the National Obesity Observatory (NOO) Standard Evaluation Framework (SEF) for weight-management programmes at a regional level. The study involved using the SEF to audit the data collected by each programme, a review of programme materials, including the theoretical rationale and evidence base for each programme, an assessment of physical and psychosocial benefits to participants and an economic evaluation of the programmes. The findings identified that on-going evaluation of all programmes, using a standard approach and validated measures was essential in order to improve the evidence base and support future commissioning. Providers were recommended to use the SEF to inform what outcomes are measured (e.g. measures of adiposity, dietary intake and physical activity) and how this data is collected and stored.</p> <p><i>Evaluation of the Food Dudes programme</i></p> <p>While previous evidence suggested that the Food Dudes programme – a healthy eating intervention – was effective in increasing children’s fruit and vegetable consumption in the short term, evidence for the long-term effectiveness of the programme was limited. The team undertook commissioned research (Grant b) to evaluate the programme as it was rolled out across schools in Wolverhampton (Reference 2). This study was the first independent evaluation of the programme to assess the long-term impact on children’s fruit and vegetable consumption at school and at home, in addition to changes in unhealthy snack consumption. The evaluation involved measuring food intake at home and school in 7 intervention and 8 control schools before the programme started, then at three months and 12 months post intervention (Reference 3). A combination of weighed intake, visual estimation and photographic food diaries were used. Children’s knowledge and attitudes towards healthy eating, family eating habits and the experiences of school staff were also assessed (Reference 4). The results from this evaluation were used to inform further rollout of</p>

the intervention in the area. The results demonstrated that the programme was somewhat effective in the short-term; however, long-term increases in children’s consumption of fruit and vegetables at lunchtime were equivocal suggesting further development of the programme to sustain behaviour change.

3. References to the research

1. Upton, P., Taylor, C. E., Peters, D. M., Erol, R. and Upton, D. (2013). The effectiveness of local child weight management programmes: an audit study. *Child: Care, Health and Development*, 39(1), 125-133. DOI: 10.1111/j.1365-2214.2012.01378.x.
2. Upton, D., Upton, P, & Taylor, C. (2012). Increasing children’s lunchtime consumption of fruit and vegetables: an evaluation of the Food Dudes programme. *Public Health Nutrition*, 6(6), 1066-1072. DOI: 10.1017/S1368980012004612.
3. Upton, D., Upton, P., & Taylor, C. (2012). Fruit and vegetable intake of primary school children: a study of school meals. *Journal of Human Nutrition and Dietetics*, 25(6), 557-562. DOI: 10.1111/j.1365-277X.2012.01270.x.
4. Taylor, C.E., Darby, H., Upton, P. & Upton, D. (2013). Can a school-based intervention increase children's fruit and vegetable consumption in the home setting? *Perspectives in Public Health*, 133(6), 330-336. DOI: 10.1177/1757913913506575.

Grants

- a. Upton, D. (PI), Regional Evaluation of Weight Management Programmes for Children and Families, Department of Health West Midlands, 2009-10, £79, 835.
- b. Upton, P. (PI), Evaluation of the Food Dudes Programme, Department of Health West Midlands, 2010-11, £162,086.

The University is confident that the underpinning research meets the 2* quality threshold. All outputs are based upon funded research where the funding was won through competitive tender. All these references are returned to UoA4 in REF2014 as: “UptonP4”, “UptonD1”, “UptonP1” and “UptonD4” respectively.

4. Details of the impact

Findings from the research into child weight management programmes were reported to the Department of Health West Midlands (DOHWM) in January 2010. In addition, a set of recommendations for commissioners of weight management programmes and a toolkit of validated measures for use by programme leads were also produced (**Source A**). The research was disseminated through publications which have been made available through various *Public Health England* websites (**Source B**). In February 2010, the research team presented the findings from the research at a workshop held by the DOHWM which was attended by weight management programme leads, commissioners, health improvement specialists and others involved in developing, running and evaluating public health interventions from across the region including: Birmingham, Coventry, Dudley, Sandwell, Shropshire, Solihull, Staffordshire, Stoke, Telford and Wrekin, Walsall, Wolverhampton and Worcestershire. Recommendations were discussed and shared with localities to enable them to improve their practice. A follow up survey to assess the impact of the research (**Source C**) was conducted in July 2010 as part of a workshop on the SEF which found that the research:

- Enabled Primary Care Trusts (PCTs) to improve measurement, data collection and evaluation;
- Reassured PCTs that they were commissioning effective programmes;
- Led to PCTs adopting the SEF to evaluate child weight measurement programmes when making future commissioning decisions.

Furthermore:

- One PCT specified that the SEF and the University of Worcester’s evaluation tools and findings *must* be used by service providers. The same PCT also used the evaluation and tools for their revised National Child Measurement Programme service;

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- One PCT decided to pilot their own in-house child weight management programme, incorporating best practice (including longer-term follow-up and measurements) identified through the evaluation and using the SEF evaluation tool;
- One PCT decided not to continue funding their current programme which had been evaluated as part of this work.
- All West Midlands' PCTs accepted the recommendation that they should continue to invest in child weight management programmes and that they should use the SEF.

The research thus enabled an improvement in these programmes across West Midlands PCTs. In addition, however, the research has informed regional health weight strategies (**Sources D & E**); it has featured in NICE reviews and guidelines (**Source F**) and informed the work of the London Assembly's Health and Public Services Committee on childhood obesity (**Source G**).

Findings from the Food Dudes Project were reported to DOHWM and Wolverhampton PCT in December 2011. Following submission of the report, the PCT agreed to fund the programme for a further two years (until December 2013) enabling a further 9,000 children to participate, bringing the total number of children to 29,000 (**Source H**).

In January 2012, Wolverhampton PCT convened a workshop to discuss recommendations of the report and to consider ways of taking the programme forward in Wolverhampton and neighbouring areas of the West Midlands. Workshop participants included the Food Dudes programme developers, local project coordinators, staff from schools, head teachers, representatives from agricultural groups and public health managers. A key recommendation of the research was the need for on-going development of the programme to ensure its short and long-term effectiveness. In response, the Food Dudes Programme now includes a second key phase called "Food Dudes Forever". This phase is designed to maintain improvements in fruit and vegetable consumption established in the initial phase of the Programme and will run each year in participating Primary Schools (**Source I**). The report further recommended that environmental factors should reinforce the intervention's healthy eating messages. This too has been taken into account through the development of "Choice Architecture of School Catering" scheme (**Source J**). This scheme maximises the environmental and behavioural cues for children to choose fruit and vegetables over high-fat and sugar-rich foods.

5. Sources to corroborate the impact

- A. Toolkit: http://www.foodwm.org.uk/resources/CWM - Revised toolkit final 20_04_2010.pdf
- B. Dissemination of research through open access websites:
- Public Health England Obesity Knowledge Update: https://www.noo.org.uk/NOO_pub/KU/9613
 - Public Health England Child and Maternal Health Intelligence Network: <http://www.chimat.org.uk/resource/item.aspx?RID=126687> (Downloaded 78 times as of 20/10/2013)
- C. Saunders, K., Baker, J., & Davis, J. (2011). *Department of Health The Healthy Weight Programme in the West Midlands Legacy Document*. Department of Health: [www.obesitywm.org.uk/resources/Report_24_V6_\(Legacy\)_2.doc](http://www.obesitywm.org.uk/resources/Report_24_V6_(Legacy)_2.doc)
- D. NHS Coventry: Coventry Healthy Weight Strategy 2010 to 2015.
- E. NHS Dudley Public Health (2012). Tackling Obesity – A Health Needs Assessment for Dudley
- F. NICE (2013) Managing overweight and obesity among children and young people: lifestyle weight management services Review 1: Effectiveness and cost effectiveness of lifestyle weight management services for children and young people: <http://guidance.nice.org.uk/PH47/SupportingEvidence>
- G. GLA Intelligence Unit (2011) Obesity in London: <http://www.london.gov.uk/sites/default/files/glac-childhood-obesity.pdf>
- H. News story announcing continuation of the Food Dudes Programme:

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<http://www.nhslocal.nhs.uk/story/food-dudes-continue-wolverhampton-further-two-years>

- I. Food Dudes Forever: <http://www.fooddudes.co.uk/food-dudes-forever.aspx>
- J. Choice Architecture of School Catering: <http://www.fooddudes.co.uk/school-catering.aspx>