



Cardiff Institute of Society and Health
Athrofa y Gymdeithas ac Iechyd Caerdydd

Free School Breakfast Initiative Data Augmentation and Analysis

Research Team

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Start date: May 2009

End date: April 2011

Funding: Moore L & Murphy S. Free School Breakfast Initiative Data Augmentation and Analysis: National Prevention Research Initiative £301,268

Background

Breakfast is commonly referred to as the most important meal of the day. Skipping breakfast is associated with a wealth of deleterious short-term health outcomes, with implications for long-term chronic disease risk, in terms of diseases such as type 2 diabetes and coronary heart disease. Furthermore, research suggests that breakfast eating contributes significantly to the overall nutritional adequacy of the diet (Nicklas et al., 2003; Sjoberg et al., 2003) and provides an opportunity to consume foods such as grain products and fruits, widely regarded as important in the prevention of chronic diseases such as cancer (US Department of Health and Human Services, 2000; Liu et al., 2003) Hence, from a public health perspective, addressing both the consumption of breakfast and the quality of foods consumed is of significant interest in primary prevention efforts.

Research in the United Kingdom highlights the need to address breakfast consumption amongst school children. In school surveys, 5% of pupils have been found to have gone without breakfast, 3% to have only consumed a drink and 10% to only have eaten low nutrition food such as crisps or chocolate (Balding, 2001) Furthermore, breakfast skipping has been found to be significantly higher amongst obese children (Elgar et al., 2005) and those from more deprived backgrounds (Keski-Rahkonen et al., 2003; O'Dea & Caputi, 2001) .

The Study

This project involves augmentation and secondary analysis of data collected by CISHE as part of a national evaluation of the Welsh Assembly Primary School Free School Breakfast Initiative (PSFSBI), which aims to improve the health of children in Wales by making free healthy breakfasts available to all maintained primary schools. To date only school level regression analyses examining aggregate effects of the intervention upon repeated cross-sections of children from each of these schools have been conducted. These unpublished findings indicate statistically significant differences between intervention and control schools in the consumption of healthy food items at breakfast, in attitudes towards breakfast, and in parental reports of a shift in breakfast consumption from home to school. The data augmentation and analyses will provide important further information on the effectiveness of the PSFSBI, and notably on the impact of the PSFSBI on socio-economic disparities in diet, cognition and school performance. This will have an immediate impact on this policy in Wales, and on breakfast club policy and provision in the UK and elsewhere.

In collaboration with the Welsh Assembly Government it will be possible for the research team to identify each of the participating students, and through this linkage obtain (current) free school meal entitlement status, (future) SAT and GCSE performance data, and postcode of residence. The postcode may then be used to obtain SES variable(s) for each student for the census output area within which their home is located.

In-depth interviews provided details of types of foods consumed, items added to foods (i.e., sugar, spreads) and portion sizes, based on the Food Standard Agency's food portion size photographic atlas (Nelson et al., 2002). Using computer software these data will be broken down to provide a comprehensive overview of children's diets in terms of macro and micronutrient intakes, giving an insight into the effects of the intervention upon children's nutrient intakes. Dietary analysis will allow for calculation of Reference Daily Intakes (RDIs) for each macro and micronutrient, based upon gender and age, details of which will be provided on each dietary record sheet. This would allow for the creation of further variables comparing intakes of each nutrient with RDIs to provide details of the percentage of the RDI of each nutrient consumed by each child, during each of the three aforementioned timeframes.

This project is being conducted in collaboration with the following partners:

- [School of Human Sciences, Swansea University,](#)
- [Health Information Research Unit \(HIRU\), School of Medicine, Swansea University](#)

For further information on the Free School Breakfast Initiative, visit the [Welsh Assembly Government's website](#)

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