Factors influencing food safety and nutrition in children’s co-curricular food-preparation classes.

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Introduction

Optimum dietary nutrition and food safety are of paramount importance for children’s health/wellbeing to enable growth and immune-system development and prevention of foodborne illness. Research suggests food-related habits, including hygiene behaviours, established from a young age have a tendency to be carried into adulthood. Within the UK, half of the reported foodborne illness cases occur in children and the rise of foodborne illness prevalence among children aged <5 years affirms the importance of children’s food-safety education. Changes in the national curriculum has resulted in limited nutritional education of children and the rise of childhood obesity affirms the importance of the need to introduce and educate young children about optimal dietary habits.

In recent years there has been an increase co-curricular food-preparation classes (CCFPCs) for infants/junior children. Such classes may provide a valuable opportunity to convey healthy eating messages to children and educate about positive nutrition and safe food-handling/hygience behaviours. To date, little is known about nutrition and food-safety inclusion in such groups.

This study aims to analyse the nutritional content of the products prepared in co-curricular food-preparation classes and adequacy of food safety practices and related interventions delivered.

Aim

In-depth interviews:

• Qualitative in-depth telephone interviews with food-preparation class leaders and parents (n=5) were undertaken using a pre-developed structured interview schedule.

• The interview schedule facilitated: determination of inclusion of food-safety in CCFPCs, reported/perceived adequacy of food-safety and nutritional information delivery, determination of class priorities/purpose and recipe/method choice.

• Qualitative data was analysed using NVivo (Version 11.4.3, 2018) qualitative analysis software.

Recipe Analysis

A nutritional analysis of cooking class recipes (n=30) was undertaken using the Nutrimen Dietary Analysis Program (Dark Green Media Limited, 2016) to determine product fat, saturates, sugar and salt content.

Data was compared with GDAs for 4-6 year olds according to FSA guidelines for meal/snacks. The FSA traffic light coding was utilised to categorise nutritional content.

A quantitative analysis of ingredient frequency within children’s class recipes (n=45) was undertaken to determine food type occurrence and opportunities for cross contamination and/or food safety education during preparation.

This study has received ethical approval from the Cardiff Metropolitan University: Healthcare and Food Ethics Panel. (Reference 9595).

Methods

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Figure 1. CCPCP leaders perspectives about class aims, food safety and nutrition.

Figure 2. Parents perspectives about CCFPC aims, food safety and nutrition.

Results

Parents and class leaders perspectives on CCFPCs aims, food safety and nutrition.

All class leaders reported the importance of teaching food safety/nutrition (Figure 1). However, parents’ perceived food safety was not adequately addressed and some class facilities were not suited to accommodate safe food production; in addition limited nutritional information was provided (Figure 2).

Figure 3. Frequency of food preparation methods (n=30 recipes).

Figure 4. Nutritional analysis of recipes according to FSA traffic light coding (n=30 recipes).

CCFPC recipe nutritional analysis and practice/ingredient frequency

Overall, 95 different ingredients were used in 30 CCFPC recipes analysed; 60% CCFPC recipes included raw egg, 22% fruit / vegetables and 18% ready-to-eat foods; few included raw meat/raw chicken.

Frequency of food safety behaviours during food preparation methods of CCFPC recipes are found in Figure 1. Ten different key food safetybehaviours were identified, four were associated with handling practices.

Selected recipes presented considerable opportunities for delivery of food safety information to children and parents attending CCFPCs.

Nutritional analysis of recipes indicated 42-62% of fat, saturates and sugar in recipes were high according to FSA traffic light front of pack coding guidelines and thus, not nutritionally appropriate for young children (4-6 years).

The number of recipes high in fat, saturates and sugar were more common for snacks than main meals.

Conclusions

CCFPCs may provide a valuable opportunity to convey information about safe food-handling/storage and optimum nutrition to children with the aim of fostering positive food consumption behaviours from a young age.

Findings indicate a disparity between intention to do so and current practice thus highlights a missed opportunity to increase awareness of healthy-related habits and safe food-handling/hygience practices with young children in a practical setting.

Tailored and age-appropriate information development and food-safety support regarding food-preparation class recipe selection and food-safety practice is required to improve and optimise this co-curricular educational opportunity.

References