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Nutrition education for early childhood managers, teachers and nursery cooks: a prerequisite for effective obesity prevention

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Nutrition education for early childhood managers, teachers and nursery cooks: a prerequisite for effective obesity prevention?

Introduction

Thirty years ago, the Ottawa Charter for Health Promotion stated, “Health is created and lived by people within the settings of their everyday life; where they learn, work, play, and love.” Today, this settings approach to promoting health still resonates; especially in the area of non-communicable disease and obesity prevention. It has now been clearly articulated how burgeoning ‘obesogenic’ environments create and perpetuate unhealthy food preferences, exploiting human biological, psychological and social vulnerabilities making it difficult to resist unhealthy food¹.

Settings in which children “learn, work, play, and love” are arguably the most efficacious for obesity prevention efforts; not only to reverse the high rates of childhood obesity but also to optimize the development of healthy habits and behaviours for life. For many young children, these settings are increasingly outside of their family and home; in group-based education and care settings, such as daycare, nurseries and kindergartens, collectively called Early Childhood Education (ECE) services. The OECD reports that over 80% of three and four year olds in developed countries attend ECE services, with England and New Zealand having some of the highest enrolment rates in the world². The healthiness or otherwise of ECE environments is key to the prevention of obesity.

This commentary draws on information about ECE services in England and New Zealand, as these countries have a similar mixture of private and community-based ECE services, part-subsidized and subject to state regulation and monitoring. England and New Zealand also have some of the highest rates of childhood overweight and obesity in the world (29% in England and 33% in New Zealand) and both governments have made commitments to address this issue, with early plans to combat childhood obesity

underway. The aim of this commentary is to outline the evidence-informed components of healthy education environments that work to prevent obesity, and then to make the case that a prerequisite component found to be lacking in many ECE settings is nutrition education for ECE managers, teachers and food service staff.

Nutrition education of ECE teachers and cooks in England and New Zealand

Currently, in both England and New Zealand, the nutrition education of ECE teachers is at best a few hours during a three- or four-year teacher training qualification, with subsequent professional development courses usually only undertaken if the employing ECE service participates in a health promotion programme. Cooks working in ECE services typically receive even less nutrition training than ECE teachers. There are no mandatory qualifications required to cook food for children in ECE services in England and New Zealand, although a small number of advertisements for ECE cooks do specify a requirement for a minimum qualification in food safety, food production or cookery.

The largest providers of ECE professional development regarding child nutrition in both countries are non-governmental health promotion organisations. In England, the Children's Food Trust provides nutrition education to ECE managers, teachers and nursery cooks through the Eat Better, Start Better programme to assist with the implementation of the Voluntary Food and Drink Guidelines. In New Zealand, the Heart Foundation provides some training for managers and staff in conjunction with the Healthy Heart Award programme, including a limited number of menu development courses for cooks. A recent review of the Healthy Heart Award programme found greater need for teaching and mentoring of ECE staff to increase their confidence and enable them to have "difficult conversations" with families about healthy food³.

Components of a healthy education environment for preschoolers

Many ECE services in England and New Zealand provide food, and all, either consciously or unconsciously, impart norms about eating and food to children in their care. Whole-of-environment (sometimes called multilevel or systems) approaches have been found to be the most effective for obesity prevention in childcare settings, whereby all aspects of policy, food provision, staff practice and teaching, and communication with families and the wider community function collectively to support and reinforce healthy eating behaviours^{4,5}. Table 1 presents a list of the components found to be effective within ECE nutrition settings for obesity prevention. Indicators in the table that would require the nutrition education of staff in order to be successfully implemented have been starred (21 out of the 34 components).

To create and maintain the healthy ECE environment detailed in Table 1, a culture must exist where child nutrition and health-promoting behaviours are prioritised. The Toy-Box study in kindergartens of six European countries considers teachers' training to be critical in creating this culture⁶. Teacher nutrition education is stated to be "a key element for successful [obesity prevention] interventions," requiring not only an increase in knowledge and skill development, but often a change in attitude, habits (in order to be positive role-models) and self-efficacy (the belief that they can influence child eating behaviours), to create the prerequisite motivation and enthusiasm⁶. Indeed, it would seem unrealistic to expect teachers to provide nutrition education to children and families, when they themselves have not had adequate training in nutrition and their self-efficacy may be low.

Table 1: Indicators of Early Childhood Education settings that support healthy eating and physical activity behaviours in young children

Component	Indicators
Policy and leadership	Service has a written nutrition or healthy eating policy**
	Service has a written physical activity or active movement policy
	Comprehensive range of topics in written policy: nutrition education, nutrition standards, promotion of healthy eating, physical activity, communication and evaluation**
	Strong statements used in policies (e.g. words such as 'must', 'will') **
	Someone at service is a 'nutrition champion' who shares knowledge and skills about nutrition, raises awareness and promotes positive change regarding food and nutrition for children**
	Someone at service is an 'activity champion' who shares knowledge and skills about active movement, raises awareness and promotes positive change regarding physical activity for children
Nutrition education for children	ECE service has an edible garden (grows fruit and vegetables on site)
	Children regularly involved in gardening
	Children make, bake or cook healthy food regularly**
	Food and nutrition concepts are included in teaching practice**
	ECE service participates in a health promotion programme or curriculum**
	[If applicable] Fundraising with food is consistent with nutritional messages and follows any government guidelines**
Food provision to children	[If lunchboxes brought from home] Has written guidelines for everyday food brought into the service**
	[If food provided daily] ECE service employs a cook**
	[If applicable] ECE service has a menu with a four-week cycle (minimum) and seasonal variations**
	[If applicable] Menu meets nutrition guidelines for at least 50% of recommended daily serves from core food groups and variety within core food groups across the week**
	[If applicable] Menu limits availability of 'sometimes' foods and does not include 'occasional'/non-core foods**
	Any food provided to children is recorded and easily seen by parents
	ECE service has written guidelines for food brought from home for celebrations, e.g. birthdays, events**
Nutrition behaviours	Staff sit with children while they eat
	Staff eat and drink the same things as the children
	Staff talk to children about what they are eating**
	Staff do not hurry children to finish eating**
	Staff encourage/promote water consumption**
	Children serve themselves food from communal platters**
	Staff offer children a second helping if they finish the food on their plate only after checking verbally if full**
	Staff do not use food to reward "good" behaviour, e.g. for toilet-training or as a treat for tidying up**
	Staff do not withhold food as a behaviour consequence, e.g. only children who are quiet get a biscuit**
Activity behaviours	Children are engaged in active teacher-led play time every day (indoor or outdoor)
	Indoor active play space is available
	Staff members do not restrict the active play of children who misbehave, e.g. by sending a child inside or placing them in 'time out'
	Screen-time is restricted (limits placed on time children spend using computers, tablets etc)
	Children do not watch television or DVDs/movies etc.
	A variety of different physical activity strategies and equipment are used by staff at the service

Key: ** requires nutrition education of staff at the ECE service to be effectively implemented.

There is little research on the effect of nutrition education with ECE staff. Interventions in United States Head Start childcare centres have shown statistically significant associations between improving teachers' self-efficacy and their increased knowledge of health-promoting behaviours⁷. An intervention in 62 Irish preschools found the nutrition education of managers and teachers on average doubled the "best practice criterion" score of participating services, resulting in considerably healthier nutrition environments⁸. Interestingly, this study found the nutrition education of managers alone (without their staff present) was equally effective as training both managers and teachers, possibly due to the positive impact of leadership in education settings⁸. Only one study appears to have investigated the effect of teacher nutrition education on preschool body size outcomes⁹. This longitudinal study following 12,000 kindergarten children in 7 schools in Thailand reported that the prevalence of obesity in children significantly decreased in the third and final year of the intervention only in those schools which had received teacher education⁹.

Conclusion

In summary, there are several key components required to create healthy early education settings that foster good eating and activity preferences and habits in children. These include: effective policy and leadership, nutrition education for children, appropriate food provision, and healthy nutrition and activity behaviours. A prerequisite for many of these components of a healthy ECE environment is the nutrition education of ECE managers, teachers and cooks. Without a sound knowledge and understanding of the reasons and mechanisms behind health promotion practices and the confidence that what they do makes a difference to children's dietary patterns and food preferences it is difficult to see how changes can be implemented effectively to prevent obesity. Existing efforts to provide nutrition education to ECE teachers and

cooks in England and NZ, although positive, are under-resourced and generally limited to ECE services that have already taken voluntary steps to improve the healthiness of their environment. The extension of nutrition education to all ECE managers, staff and cooks would see obesity prevention efforts move beyond narrowly targeted interventions to widespread improvements in all ECE settings to better equip children to live a long and healthy life.

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