What is the Early Childhood Teacher’s Role in the Prevention of Childhood Obesity?

Meg Moss 2016

Introduction
This is not an academic paper but more a personal account of my own and our centres review on nutrition and physical activity over the last couple of years. I have developed a passionate interest in this area which has been fuelled by two courses I have completed through the University of Sydney. One was on Physical Activity and the Spread of Non-Communicable Diseases and the second was on the Global Obesity Epidemic.

The World Health Organisation recently published a report called Ending Childhood Obesity.

This report points out that obesity is reaching alarming proportions in many countries throughout the world. We live in what can be called an obesogenic environment. Many children are growing up in an environment that encourages weight gain through an increase in the intake of energy-rich, nutrient poor-foods and a decrease in physical activity. There is a growing concern that medical treatments and diet regimes for children and adults who are overweight or obese are problematic, expensive, very hard work for the individual and can have limited long-term success. Obviously the ideal is to prevent children from becoming obese or overweight in the first place. Our whole society has a role to play in this.

Confront: How did I come to be this way?

Our individual attitudes to our own size and health and that of others is something that teachers should reflect on. Our feelings about food and eating patterns are formed early in our upbringing. I was born and raised in Scotland and come from a long line of hard-working farming people. My memories of childhood are of my father and uncles going out early in the morning and working for a couple of hours before coming back to the huge cooked breakfast. The food we ate then would now be considered to be a very poor diet. There were a lot of fried foods and a feature of our kitchen was a frying pan which constantly had a layer of fat in it. We grew all our own vegetables but the variety was limited given the cold climate. The fruit which grew in Scotland was mostly pears, apples and berries. I was the youngest of four children and my mother grew larger and larger with each pregnancy. I regarded that as the inevitable result of child-rearing as many women of her generation were fairly large. She was never very pleased about this and throughout my childhood I remember her wearing very strong corsets, dieting and being unhappy about her size. I did not want this for myself or our children though I suspect it that it might be my genetic a lot (coming from a background of short, wide people).

What balanced our high intake of food was that everyone in my family worked extremely hard. From a very young age we were involved in gardening and household management tasks. Like many teenagers I was unhappy with my shape and tried to manage food intake for a number of years.

I encourage all teachers who work with children and their whānau to reflect on their beliefs about body size and examine their relationship with food. What I want for our own children
and all the children I work with is that they have a happy, positive relationship with food and to like being who they are.

In my early 20s I read a book called “Fat Is a Feminist Issue… How to Lose Weight Permanently – without Dieting” by Susie Orbach. 1978. It had a profound effect on me and I decided never to diet again. Interestingly the conclusions Susie Orbach came to are reiterated in a book published this year “Fat Science. Why Diets and Exercise Don’t Work – and What Does” by Robin Toomath. This book describes the science behind why individuals get into a cycle of dieting, losing weight, stopping dieting and putting it on again. Her conclusion is that the free market system is failing to preserve health and citizens should demand that policymakers do something to regulate our environment. (Toomath, 2016, p. 170) I certainly believe that current policy which relates to early childhood centres is not ensuring environments which ensures good levels of nutrition and physical activity for all the children attending.

“We postulate that New Zealand’s childcare policies rated lower than the Connecticut policies due to the lack of regulation, evaluation and guidance on child nutrition for ECE-services. The nutrition regulations for New Zealand and ECE services are very brief and weak compared with the UK and Australia which have both recently developed robust and lengthy guidelines for childcare nutrition policy, food standards and related behaviours.” (Gerritson S, 2015, p. 1539)

There appears to be the will to regulate in some areas of ECE food provision. The safety of children’s food provision is going to be monitored through the Food Act (Ministry for Primary Industries, 2014) but not the nutritional value nor the level of at which teacher’s are providing education on eating and physical activity for health. http://mpi.govt.nz/food-safety/food-act-2014/ The Education Review Office have been looking at this area of children’s education and I look forward to reading their national report

**Do any childhood teachers have a remit in this area?**

Many teachers inevitably have to be involved with preparing and serving food to children. For years it has been part of the Education and Care Centre and Kindergarten routine. We are now guided by curriculum guidelines in Te Whāriki. (Ministry of Education, Te Whariki: He Whariki Matauranga mo nga Mokopuna o Aotearoa: Early Childhood Curriculum, 1996, p. 9)

“We aspire for children to grow up as competent and confident learners and communicators, healthy in mind, body, and spirit”

Wellbeing, Children develop:
”Self-help and self-care skills for eating, drinking, food preparation Questions for reflection: How are parents encouraged to provide healthy food for children” (Ministry of Education, Te Whariki: He Whariki Matauranga mo nga Mokopuna o Aotearoa: Early Childhood Curriculum, 1996, p. 48)
We are also required by the licensing criteria covering early childhood centres to be concerned with the nourishment of children

HS19 to 22

“Food is served at appropriate times to meet the nutritional needs of each child while they are attending. Where food is provided by the service, it is of sufficient variety, quantity, and quality to meet these needs.

Where food is provided by parents, the service encourages and promotes healthy eating guidelines” (Ministry of Education, Licensing Licensing Criteria for Early Childhood Education and Care Centres, 2008, p. 21)

But do you know what healthy means? What are the nutritional needs of each child? In 1916 the first United States Department Agriculture food guide was published. It identified food groups and recommended that diets be selected from a number of different food groups to ensure that both known and unknown nutrients be consumed in adequate amounts. (Hunt, C, US Department of Agriculture, 1916)

<table>
<thead>
<tr>
<th>Food group</th>
<th>% of daily food intake</th>
<th>10% Milk 10% other</th>
<th>20%</th>
<th>30%</th>
<th>Fats 20% sugars 10%</th>
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<tbody>
<tr>
<td>proteins (milk and meat)</td>
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<tr>
<td>Bread, cereals and other starchy foods</td>
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<tr>
<td>fruit and vegetables</td>
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<td></td>
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<tr>
<td>fat and sugars</td>
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Guidelines have changed a bit in 100 years!

The Ministry of Health reviews and updates guidelines from time to time. People have used the food pyramid for a long time with the idea that we should eat lots of the things in the bottom layer and very little of the things on the top layer. The Heart Foundation produces many educational resources and now replaced this model with a different shape. (Heart Foundation, 2016)

There are many things in our diets now which we did not have 100 years ago or even 20 years ago. There are many food additives such as colourings, flavourings and sweeteners which are not even considered in dietary guidelines but they exist in many processed foods. There is no comment on their contribution to childhood obesity. So nutrition guidelines to teachers and parents will continue to evolve.

Even if you know and believe the guidelines how much does it affect your decisions about food provision for children? In 1997 I was involved in a research project for a Master of Public Health. It was titled Managing Food Matters: Factors Affecting the Food Management Practices of Mothers of Young Children and the Implications for Health Promotion. Although this was a small research project the findings seemed very logical. Many of the parents interviewed had sound knowledge of dietary guidelines but their decisions about what food they give children were influenced by a number of other factors. These were: (McGregor, 1997, p. 124)
Personal factors

- health and nutrition concerns

Interpersonal factors

- mothers as caretaker and the expectation of the “ideal” family meal
- children’s likes and dislikes
- the likes and dislikes of husbands and partners

Environmental factors

- financial factors
- time and convenience factors
- other environmental factors (advertising pressure on the child, availability of certain foods)

Although there is ample information on good nutrition available to the whole population of New Zealand it is still evident that children’s health is suffering. The Annual Update of Key Results 2014/15: New Zealand Health Survey found that (Ministry of Health, http://www.health.govt.nz/publication/annual-update-key-results-2014-15-new-zealand-health-survey)

- one in nine children (aged 2–14 years) were obese (11%)
- a further 22% were children were overweight but not obese
- 15% of Māori children were obese
- 30% of Pacific children were obese
- children living in the most deprived areas were five times as likely to be obese as children living in the least deprived areas
- the child obesity rate increased from 8% in 2006/07 to 11% in 2014/15.

We need to do more than to educate ourselves and the families we work with. Providing information on nutrition and physical activity is only part of the story. Teacher education is just one of the areas which is currently under resourced although it has been identified as part of the Government’s plan to fight childhood obesity.

No matter what our genetic background, personal circumstances or health conditions obesity is caused by having an excess of input over output.

“Our body weight or size is determined by the balance of energy in (what we eat) versus energy out (how active we are). Increased body size is caused by an energy imbalance – energy in exceeds energy out. Obesity is caused by a chronic energy imbalance and results in a high amount of body fat in relation to lean body mass. (Waikato District Health Board, 2015)

The output part of the equation is physical activity. According to Dr Toomath exercising enough to combat existing obesity is a big challenge. While agreeing that exercise is good for
us she says that in her experience it’s not practical to suggest exercise for weight loss to overweight patients. (Toomath, 2016, p. 34) However, ensuring that children are physically active in their formative years as well as being well nourished seems a good way to prevent obesity which is no doubt why the Government is showing an interest in is whether children under five are being physically active. The Ministry of Health has recently published a review of physical activity guidelines and resources for the under fives. They look at three areas: physical activity, secondary behaviour and sleep patterns. Here are the recommendations for physical activity and secondary behaviour.

**Physical activity (PA)**

Infants should participate in unstructured, participative floor-based opportunities for play throughout the day including tummy time and safe, supervised water environments.

Toddlers and pre-schoolers should participate in a wide range of activities that involve all of the main groups of muscles and basic movement skills in a variety of indoor and outdoor settings.

Toddlers and pre-schoolers should engage in at least three hours of PA (spread throughout the day, every day) including at least some moderate/vigorous physical activity for pre-schoolers.

**Sedentary behaviour**

Infants should be sedentary for limited periods at a time (excluding sleeping and eating)

Pre-schoolers should be sedentary for no more than one hour at a time (excluding sleeping and eating)

Children under two years should have no screen time.

Screen time for older children should be limited to less than one hour per day (although less is better). (Ministry of Health, http://www.health.govt.nz/publication/review-physical-activity-guidance-and-resources-under-fives, p. 9)

These are excellent starting points for teachers and centres to review what levels of physical activity and sedentary behaviours are experienced by children in the centre or kindergarten each day. It would be interesting for teachers themselves also to monitor how physically active or secondary they were in their working day.

There have been a variety of PA initiatives used in early childhood centres. The Under 5 Energize scheme was introduced by Sport Waikato in 2014. (Sport Waikato) This was (is?) to be evaluated by AUT. The University of Waikato and Massey University are to evaluate another initiative taking place currently. It is using Jumping Beans as a collaborator working to promote healthy eating and exercise patterns through a partnership with BestStart Education and Care Centres in South Auckland. (http://www.waikato.ac.nz/news-events/media/2016/study-helps-give-kids-the-best-start-to-reduce-obesity-rates).

In our centre we have taken an approach where we use the space, equipment, routines, personnel and resources which we currently have.
Nutrition

We prepare all food with children in the classroom area rather than in the kitchen. We use electric frying pans and slow cookers, real knives and chopping boards. Children have grown up as babies watching the process and they can learn safely and competently. We have regular family meals where parents are invited to join and share. We garden and invite families to share their excess produce with us. We constantly review and refine out menu so that we are using whole food as much as possible, no added sugars and minimal processed foods (we cannot make all our own bread). We look at recipe books with children to choose meals for the following week.

<table>
<thead>
<tr>
<th>Date</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
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<tbody>
<tr>
<td>11.07.16</td>
<td>Celery and steamed carrots Bread, Crumpets or Muffins with butter or marmite Milk</td>
<td>Seasonal vegetables Bread, Crumpets or Muffins with butter or marmite Milk</td>
<td>Seasonal vegetables Bread, Crumpets or Muffins with butter or marmite Milk</td>
<td>Cauliflower/tomato Bread, Crumpets or Muffins with butter or marmite Milk</td>
<td>cucumber Bread, Crumpets or Muffins with butter or marmite Milk</td>
</tr>
<tr>
<td>Morning tea</td>
<td>Stewded apples and yoghurt</td>
<td>Stir-fry beef and vegetable with brown rice 108 Fruit platter and milk</td>
<td>Roast chicken and vegetables berry smoothie</td>
<td>Crudité with Hummus, Stewed pears and yoghurt</td>
<td>Tuna rice cakes and salad, 90 fruit salad and yoghurt</td>
</tr>
<tr>
<td>Lunch</td>
<td>Celery, Mushroom and Walnut Pasta (120)</td>
<td>Seasonal Fruit, Milk. Date loaf</td>
<td>Seasonal Fruit milk cheese sandwiches</td>
<td>Seasonal Fruit, Milk, herb scones</td>
<td>Seasonal vegetables tuna sandwiches,</td>
</tr>
<tr>
<td>Afternoon Tea</td>
<td>Seasonal fruit, Milk. Date loaf</td>
<td>Seasonal Fruit milk cheese sandwiches</td>
<td>Seasonal Fruit, Milk, herb scones</td>
<td>Seasonal vegetables tuna sandwiches,</td>
<td>Seasonal fruit, milk Oat cakes</td>
</tr>
<tr>
<td>Children`s Lunch preparation lessons</td>
<td>Chop fruit and vegetables</td>
<td>Peel and chop fruit and vegetables</td>
<td>Chop carrots and potato and fruit</td>
<td>Chop fruit and vegetables</td>
<td>Chop vegetables</td>
</tr>
<tr>
<td>Children`s T preparation</td>
<td>Make. date loaf</td>
<td>Make sandwiches</td>
<td>Make scones</td>
<td>Make sandwiches</td>
<td>Make oat cakes</td>
</tr>
</tbody>
</table>

The centre stocks the staffroom fruit bowl to encourage teachers healthy eating.

Physical Activity

We go for daily walks with 2 teachers and 8 children. We have physically active mat times (as well as sit down story times). Our outdoor area is open at all times and in all weathers. Babies spend every moment possible on the floor, not in chairs or being carried. We run as a
mixed age centre so that all children can make use of all areas and different ages learn from each other. We encourage children to run round our playground. Teachers join in being physically active. Children help with all household tasks, hanging out washing, gardening, tidying, raking the bark and sand.

**Sedentary Behaviours**

We use standing desks for adults and standing tables for children (except when they are eating). Teachers have standing meetings. We always go the long way round between out rooms (down some stairs and up some stairs!).

After much consideration and consultation we have decided against children having sit down screen times. They can look at their portfolios on the ipads with teachers but then the devices will be put away, our parents feel that their children get enough screen time outside the centre and will not be deprived of ICT skills.

Teachers are interested and committed to continuing to increase their knowledge of health promotion. Through reading, on-line learning, collaborating with centres and schools and looking after their own health.

**Reconstruct What can we do differently?**

We can be open-minded and aware of the issues facing this generation of children. We can see it as being part of our role. We can be courageous and open in discussing sensitive issues without waiting until the B4school check. We can change our teaching practices and not do what we have always done if it is no longer working for children. We can look for easy no-cost everyday solutions.

“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.” (Gerritsen, 2016)

To quote from the WHO Report of the Commission on Ending Childhood Obesity 2016

“The greatest risk to effective progress on childhood obesity is a lack of political commitment and that governments and other actors will fail to take ownership, leadership and the necessary actions.

A whole of society approach offers the best opportunity for addressing childhood obesity. Both governments and other actors, notably, civil society can hold each other and private sector entities to account, to ensure they adopt policies and comply with standards.

Strong commitments must be accompanied by strong implementation systems and well-defined accountability mechanisms”. (World Health Organisation, 2016)

**Works Cited**


Other references

Prof Boyd Swinburn talking about the Lancet series on obesity. This is a fascinating presentation
The 2015 CO-OPS National Workshop took place in Melbourne from 19-20 May. Over 100 participants from across Australia attended the Workshop
https://www.youtube.com/watch?v=4qJ81XvLYtc&feature=youtu.be


The Office of the Auditor General (2013) *Evolving approach to combating child obesity* 