

***An Evaluation of Food and Nutrition Training Received by
Pre-School Providers and Determination of a “Healthy Food
Award” Scheme in the Pre-School Setting of the Midland
Health Board***

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I. Executive Summary

Introduction

Feeding habits formed in the toddler years are important building blocks for adult health. The nutritional needs of children must incorporate what is required for both maintenance and growth. The food preferences developed in early childhood, including those for sugary, salty, fatty foods, may have an impact on eating behaviour in later childhood and adult life, and indeed on future health.

The food served in pre-school services is of great importance in a young child's health. The pre-school setting provides the perfect environment for promoting and learning about healthy eating and physical activity. The provision of nutritious food positively enhances not only a child's health, but also allows the child to take full advantage of the learning opportunities provided in pre-schools (DOH, 2004). Specific food and nutrition guidelines for pre-school services have been developed in response to the goals and objectives of the National Health Promotion Strategy 2000-2005 and the National Children's Strategy – Our Children – Their Lives (2000).

A "Food and Nutrition" training day was run by the community dietitian in September for the pre school providers. This project aims to assess the degree to which the pre school services implemented the guidelines in their service and to investigate the need for further training. Another aim of this project is to determine the views of pre school team members on the possible implementation of a "Healthy Food Award" scheme in the pre-school setting.

Aims and Objectives

Aims:

- To evaluate if the training received by pre-school providers has helped them to implement changes in their practises towards healthy eating for pre-school children.
- To determine the views of the pre-school team members on a healthy eating award scheme, and to evaluate if such an award scheme is possible to accomplish in the pre-school setting.

Objectives:

- To promote healthy eating in the pre-school setting
- To determine the need for further training of child minding staff in the provision of healthy eating and nutrition.
- To investigate the concept of a healthy food award scheme for pre-school children
- To consult all team members involved in the provision of child care
- To identify barriers experienced by the pre-school providers in the implementation of the training they received
- To collate results of the study and establish the effectiveness of the training course

Methodology:

This study was an evaluation of the training received by the pre-school providers, and an exploration of the views of the pre-school team members on a healthy food award scheme. It involved the use of questionnaires in two different groups of people. The first group was the pre-school providers (PSPs) and the second was the pre-school team members (PST). The study was based in the pre-school setting in the Midlands region of Ireland. The sample size of the pre-school providers was $n = 17$, and the sample size of the pre-school team members was $n = 9$.

Results:

Within the PST members, attitudes towards a healthy eating award scheme were as follows:

- 8 members had heard of the concept of a healthy eating initiative in pre-schools
- 5 believed that an award scheme would be best, 3 thought an initiative would work best, and 1 thought that recognition for healthy food provision would be the best way forward
- 8 said it would be easy to implement, all 9 said it would be useful in the education of the PSPs, all 9 believed it would act as an incentive for PSPs to have healthy eating policies in place, 8 said it would be a scheme that could be put into place nationwide, and 1 said it would be difficult to get funding for.

- 6 believed that lack of funding would be a problem in implementing the scheme, 7 said that a lack of education in the PSPs would be a problem. 1 person believed the scheme would be difficult to monitor
- All 9 people believed that a certificate or media coverage would be the best incentive for the scheme
- The kinds of support needed for the scheme included parents (through education), a development worker, funding, cover provided, staff training, and a whole-team approach

The results of the PSPs on training evaluation were as follows:

- 100% people believed that the training helped them to provide healthy food and drink in their service
- 100% PSPs had started to put the ideas of healthy drinks and snacks, and the menus based on the food pyramid, into practise. Almost all (n=16) had started to provide more iron-containing foods on the menu, and had stopped offering reward and treat foods.
- The areas of training the PSPs found most useful were the iron-containing foods (n=9), fussy eaters (n=3), healthy drinks (n=3), and the food pyramid for children (n=2). 3 PSPs reported that every element of the training was useful.
- 12 PSPs had started to develop a healthy eating policy as a result of training
- The biggest problems reported to setting up a policy was lack of time (n=5), poor understanding of the importance of healthy eating (n=4), and a lack of support from the parents (n=3).
- 10 of the 12 people who had developed a policy said it was easy to achieve. 5 people said it had been extra work for them.
- The types of support the PSPs believed they needed to have for a healthy eating policy were; parents (n=8), a dietitian/contact person (n=3), ongoing training (n=1), cover provided (n=1) and staff participation (n=1).
- All 17 PSPs said the training had been useful to them as a business
- All 17 PSPs believed that the implementation of an award scheme would be a good idea

Conclusions and Recommendations

The pre-school years are a great time to help children form positive attitudes towards food and physical activity and to develop good eating practices. During this time, children are very open to learning new ideas and concepts. There is certainly a need for a comprehensive large-scale study into the dietary habits of pre school children, to analyse the exact nutritional content of children's diets.

One of the main conclusions we can draw from this evaluation is the fact that the training day the PSPs received was successful. They all had taken on board the main messages, they found the training very useful, and a large proportion had already begun to implement a healthy eating policy, as a result of training.

A healthy eating policy should exist in *every* pre-school facility. The policy should be drawn up in conjunction with parents, the pre-school providers, and the pre-school team members. The staff involved should receive regular ongoing training regarding the provision of healthy eating.

The PST believed that an award scheme would work best in the pre-school setting. The criteria for the award to be given should be clearly defined. The guidelines of the Happy heart Catering Award scheme could be incorporated into the healthy eating scheme. The government must provide adequate funding, and the scheme should receive recognition of its importance. A whole-team approach, where all health professionals work together in implementing the scheme will help to move the project forward, and ensure it runs smoothly. The progress of the healthy eating policy and the effectiveness and implementation of the "Healthy Food Award" scheme should be monitored on a regular basis.

II. Background:

“ A person carrying on a pre-school service shall ensure that suitable, sufficient, nutritious and varied food is available for a pre-school child attending the service on a full time basis”
Article 26 (1) of the Child Care Regulations 1996.

There are several reasons why a child’s diet needs special care and planning: the need for energy and protein is high relative to the child’s size; the stomach is small so children are not able to eat large quantities; young children are usually very active; and though appetite can fluctuate markedly, the range of foods a child is inclined to eat is often limited. Therefore, it is imperative that the nutritional needs of children are met, and there is the correct balance between the types of foods eaten and physical activity levels.

There has been very little research done in the Irish setting regarding the dietary habits of pre-school children. Nutrition of children in the school setting is a subject that receives broad attention. Comprehensive analysis is available of food that is offered to and consumed by school-aged children in the primary and secondary school setting (Burghardt, 1995, Gordon *et al.* 1995). Much less is known, however, about the nutrition of pre-school children. A study done by Beckett *et al.* (1995), found that the food offered on the menus in child care centres provided less than one third of the RDA for energy, calcium, iron, zinc, vitamin B12 and vitamin E.

The Health Behaviour in School-aged Children (HBSC) study was conducted in Ireland as part of the WHO European collaborative study, which focused on the health of children aged 10-15 years. This study found that within the Midlands, 58% of children are reported to be eating high fat or sugary foods three or more times per day; 24% boys and 18% girls report eating vegetables more than once per day, and 36% boys and 38% girls report eating fruit more than once per day (HBSC, 2000). Overall, 15% of children report that they never have a breakfast, and 8% reported they never have breakfast at the weekend. 7% children report never having lunch during the week and 17% reported the same at the weekend.

This study highlights the huge inadequacies of Irish children's diet. There is certainly a great need for more focus to be placed on the improvement of healthy eating in children. It is likely that the habits formed in early childhood in these children have continued into later years, and therefore our efforts should be to concentrate on the education of pre-school children, to help devise good dietary practices early on.

The most comprehensive study done to date on the nutritional content of the diet of pre-school children was carried out in the National Diet and Nutrition Survey (NDNS) of 1859 children between the ages of 1½ and 4½ years in England in 1995. This survey found that although these children were achieving adequate energy intakes for their needs, approximately 20% was derived from non-milk extrinsic sugars (NMES) found in foods such as biscuits, sweets, confectionery and sugar-containing drinks (Thomas, 2003). About 10% of the group were deriving more than one-third of their energy intake from NMES (Gregory et al, 1995). The main consequences of such high intakes of NMES would be the increased risk of developing dental caries, and also the diet would be relatively nutrient dilute. High-sugar foods contain very little micronutrients relative to their energy content.

The NDNS showed that the majority of children had adequate intakes of most vitamins, with the exception of vitamin A, for which half the children had a mean daily intake below the reference nutrient intake (RNI) of 400µg (Gregory et al, 1995). 35% of the children surveyed had vitamin C intakes below the RNI, and within the 4-6 age group, it was found that 84% of children had intakes below the RNI for iron, with almost 20% having very low intakes (Gregory et al, 1995). The main sources of calcium in the diet of this age-group surveyed was milk and milk products, however it was found that these foods contributes most to the calcium intakes of the youngest children in this age-bracket, and to a lesser extent as children grow older. Cereals and cereal products are the other main source of dietary calcium in the older child (Gregory et al, 1995). The survey also showed that 12% children aged 1½ to 2½ years were anaemic, and 28% children aged 1½ to 2½ years had serum ferritin levels below 10µg/L.

The dietary patterns of the children surveyed in the NDNS would be similar to the Irish population. Due to the extreme inadequacies, which seem to be prevalent among this age group,

it is imperative that we aim to put the necessary measures in place for healthy eating in the pre-school setting, to establish good eating patterns for later life.

Dental caries amongst pre-school children remains a significant dental public health problem (Watt *et al.* 2001). In a study done in the UK as an adjunct to the Gregory *et al.* study, it was found that 56% of the children consumed soft drinks more than once a day. This high consumption of fizzy drinks has huge implications for the development of dental caries. (Watt *et al.* 2000).

A “Food and Nutrition” training day was run by the community dietitian for the pre school providers in September. This involved presentations, questionnaires and group workshops on healthy eating for the pre school age group. The topics covered, included breast-feeding, bottle-feeding, weaning, the food pyramid for children, meal suggestions, snacks, drinks, special food needs, fussy eaters, and dental health. There was also a section devoted to healthy eating policies, and how to develop and ensure the success of initiatives put in place. The importance of physical activity was also discussed. Each participant was given a folder of handouts and information leaflets on healthy eating for pre school children at the end of the day. Part of the aim of this project was to assess the degree to which the pre-school providers implemented any of the guidelines given as a result of training.

Many reports suggest that the prevalence of obesity among children of the pre-school age group is increasing. Although there are no studies at present detailing the Irish situation, the research in England paints a grim picture for the future adult population. Reilly *et al.* (1999) showed that the proportion of children under 6 years of age who were overweight was 21.8% and 10.4% were obese. Historically, a fat child meant a healthy child, one who was likely to survive the rigors of under nourishment and infection. In the past decade however, excessive fatness has arguably become the primary childhood health problem in developed nations (Ebbeling *et al.* 2002). As with adults, obesity in childhood causes hypertension, dyslipidemia, hyperinsulinemia, sleep apnoea and exercise intolerance (Ebbeling *et al.* 2002).

The cause for concern is twofold. Firstly, cohort studies show that obesity may track from childhood to adulthood, where morbidity is very evident. Secondly, obesity in adolescence is directly associated with increased morbidity and mortality in adult life, independent of adult body weight (Rudolf *et al.* 2001). The pre-school years, when the principal dietary habits and physical activity patterns are formed and continue throughout childhood into adolescence, can predispose a child to gaining excess weight. It is vital that children are given proper education on healthy eating within the pre-school setting.

Two key components for health education in pre-schools are diet and physical activity. Within the pre-school setting, both should be promoted as part of a co-ordinated, comprehensive programme for school health. A healthy eating scheme in the pre-school setting would be a primary intervention strategy to help combat the most common nutritional problems in this age-group.

Because the pre-school setting has been identified as providing an excellent environment to introduce the concepts of healthy eating, many school-based efforts have been orientated towards the prevention of obesity, and increasing children's awareness of the benefits of healthy eating. These initiatives are very much based in the primary school setting, and few programmes are actively targeting children before they start primary school. It has been shown that school policies on healthy eating can have an impact on children's food habits (Vereecken *et al.* 2004). One of the aims of this project is to identify a healthy eating school-based scheme, which could be used in the pre-school setting.

There are number of healthy eating award projects in schools in various countries, which could be adapted for implementation in the pre-school setting. In New Zealand, the Heartbeat Awards project aims to promote and support healthier eating among school children by the introduction of the Heartbeat Awards in schools. This involves the food served from menus in the schools being analysed according to the criteria of the Heartbeat Awards in Schools project (Peach *et al.*, 1995).

Promotion of healthful dietary behaviours should begin early in life, since it has been established that atherosclerosis begins in childhood (Williams *et al.*, 2002). The “Healthy Start” intervention set up in New York in 1999 involved preschool and food service nutrition education in nine “Head Start” centres. The project resulted in a significant reduction in the amount of saturated fat and total fat consumed from school meals, while maintaining adequate total energy intakes (Williams *et al.*, 2002).

The “Start Right - Eat Right” award scheme set up in Western Australia in 2001, which was designed by researchers in the Curtin University of Technology, is an initiative by the Health Department to acknowledge child care centres providing nutritious and safe food. Every centre must complete a number of criteria before the award is given which includes;

- Cooks must have undertaken adequate nutrition training
- The centre must obtain the Food Safe certificate and have good food hygiene practices
- The menus must be assessed to ensure they provide at least 50% of the recommended daily allowances of nutrients for children
- The centre must demonstrate that their programme encourages good eating habits.

This award scheme is an excellent example of how it is possible to implement a pre-school healthy eating initiative. This programme has the support of the health department, and adequate funding and recognition of its importance from the Australian government (Pollard *et al.*, 2001).

The “Snack Attack” award in north Essex in the UK is a healthy eating ward initiative set up in preschools, nursery schools, primary and secondary schools as a symbol of recognition to those schools which are taking an active part in the promotion of healthier eating. It is similar to the “Heartbeat Award”. The school receives a certificate of recognition for providing healthy eating. The Health Promotion Unit and the Nutrition and Dietetic department of north Essex run the scheme. When a school is awarded the certificate, it is valid for two years, then the school is required to submit their certificate and prove that the qualifications are still being met (Harvey, 1997). There are five criteria to be met with this award;

1. In schools which have a tuck shop, healthier choices (low in sugar, fat, salt) should appear for sale and be highlighted in some way.

2. Schools without a tuck shop, but providing snacks, should ensure that these are of the healthy variety (fruit, vegetables, bread, milk, water, diluted fruit juice)
3. Pre-school and infant schools should promote the use of “Teddy’s Club” materials. These include tooth-friendly drinks (milk and water), fruit and vegetables snacks, foods which contain adequate sources of iron (red meat, ham, vegetables), and calcium (milk, cheese, yoghurts)
4. Schools should send representatives to sessions and lectures on healthy eating and oral health.
5. Each school should draw up a written policy covering the consumption of food and drink, including snacks, tuck shop, school lunches.

Another health programme set up in the UK is the “High Five” award, which specifically aims to promote fruit and vegetable intake in children in both the preschool and primary school settings. The award scheme focuses on fruit and vegetables being available at snack time, establishment of a healthy eating policy, and guidance and support to parents on the kinds of foods suitable for lunch boxes (www.foodcomm.org.uk/parentsjury/high_five.htm).

In Scotland, the “Scottish Healthy Choices Award Scheme” (SHCAS) programme, which is open to all food-providing establishments, including schools was set up in 1999. The school initiative is called ‘Hungry for Success: A Whole School Approach to School Meals in Scotland’ (www.shcas.co.uk). The criteria for the award include specific menu items that meet nutritional requirements, a no-smoking policy, breastfeeding policy, and high standards of food hygiene and safety must be promoted. An evaluation of the SHCAS in participating restaurants and catering outlets found that half of those surveyed experienced an increase in profits following receipt of the award.

In Ireland, a similar healthy eating initiative called the “Happy Heart Catering Award” has been set up in 1998 by the North Eastern Health Board, and the award was adopted by the Midland Health Board in 2001. The award is presented to restaurants, pubs, and workplaces who comply with the necessary environmental health and food criteria. For example, having a lean meat dish as a main course, having a choice of vegetables or salad at every main meal, avoidance of over-

cooking vegetables, having a wide variety of breads, including wholegrain, offering low-fat alternatives of dressings, mayonnaise, salad creams and desserts are some of the ideas that caterers are assessed on.

In the US, the department of Agriculture have an annual “Best Practises” awards, in the National School Lunch Programme and the School Breakfast Programme”, to encourage and reward outstanding food services in schools with a certificate of participation. In another initiative in the US, “Food on the Run” is a programme designed to increase healthy eating and physical activity among low-income high-school students to improve health. The programme had excellent results, with a significant increase in nutrition knowledge (5% increase), physical activity knowledge (6% increase), and healthy eating options offered to students at school. This project received the Dannon Award for Excellence in Community Nutrition (2000). This award recognised the project’s success at engaging youth in promoting healthy foods at school. (www.actionforhealthykids.org).

In the US, the Gold Medal School Initiative in Utah, was set up in 2001 to maximise the opportunities for physical activity and healthy nutrition choices in schools. It is part of the Hearthighway award scheme in Utah. There are a number of criteria outlined which must be achieved to win the award. These include;

- Policy for implementation of the physical education core curriculum, including 90 minutes of structured activity each week
- School establishes a Gold Medal Mile walking programme – each student must meet the goal of walking at least one mile/week
- Has policy for all teachers that food is not to be used as a punishment or reward
- Has a policy for a staff wellness program

Once the criteria are achieved, the school receives \$1000 to purchase physical education equipment, nutrition resources etc (www.hearthighway.org/school_information)

III. Aims and Objectives

Aims:

- To evaluate if the training received by pre-school providers has helped them to implement changes in their practises towards healthy eating for pre-school children.
- To determine the views of the pre-school team members on a healthy eating award scheme, and to evaluate if such an award scheme is possible to accomplish in the pre-school setting.

Objectives:

- To promote healthy eating in the pre-school setting
- To determine the need for further training of child minding staff in the provision of healthy eating and nutrition.
- To investigate the concept of a healthy food award scheme for pre-school children
- To consult all team members involved in the provision of child care
- To identify barriers experienced by the pre-school providers in the implementation of the training they received
- To collate results of the study and establish the effectiveness of the training course

IV. Methods

Study Description

This study was an evaluation of the training received by the pre-school providers, and an exploration of the views of the pre-school team members on a healthy food award scheme. It involved the use of questionnaires in two different groups of people. The study was based in the pre-school setting in the Midlands region of Ireland. The study population was split into two groups. The first group consisted of pre-school providers, who are the care assistants directly involved with the children. The second group were the pre-school team members, which included 4 environmental health officers, 2 public health nurses, 1 pre-school training officer, 1 child-minding advisory officer, and 1 pre-school services manager.

Selection of Study Population

Suitability to take part in this study for the first group was based on the criterion that the pre-school providers had attended the Food and Nutrition training day, held in September, which was conducted by the community dietitian. Some of the pre-school team members also attended this course. All subjects in this study were based in the Midlands region (Laois, Offaly, Westmeath, and Longford). A list was obtained from the Midland Health Board pre-school services of those involved in the pre-school inspection team. A list of the pre-school providers was obtained from the child minding advisory officer for the area.

Study procedures

A telephone questionnaire was chosen as the research method of choice because they are low in cost compared to face to face interviews in terms of time and travel, they can be conducted at a fast pace, which gives results in a shorter time. These advantages were suitable for this study due to the time constraints involved. Telephone interviews found are reported to be a satisfactory and efficient method of collecting data from primary care health professionals (Harris *et al*, 1993).

A number of the pre-school team members were told in advance about the project, and the managers of the pre-school establishments were contacted by telephone to discuss the project

proposal. They were also advised to inform other members of staff about the project. The questionnaires for both groups were conducted by telephone.

Sample Size

In order to obtain a cross sectional view of the opinions of the subjects involved, it was important to gather an adequate sample size. The sample size of the pre-school providers was $n = 17$, and the sample size of the pre-school team members was $n = 9$.

Data Management

This study involved using structured interviews, over the telephone for both groups of subjects, for the purpose of completing the questionnaires. These questionnaires were then analysed for universal themes and issues which were common between subjects. The questionnaires, when completed, were destroyed after analysis. Confidentiality and anonymity was explained clearly to each subject, before the commencement of the telephone interview.

Ethical Considerations

The study did not have any contact with the pre-school children themselves, and therefore, once the pre-school providers or team members themselves consented to be involved in the project, it was not deemed necessary to obtain consent from anyone closely connected to the children.

Timetable

This project was conducted over four weeks altogether, running from the 22nd of November to the 17th December 2004.

V. Results

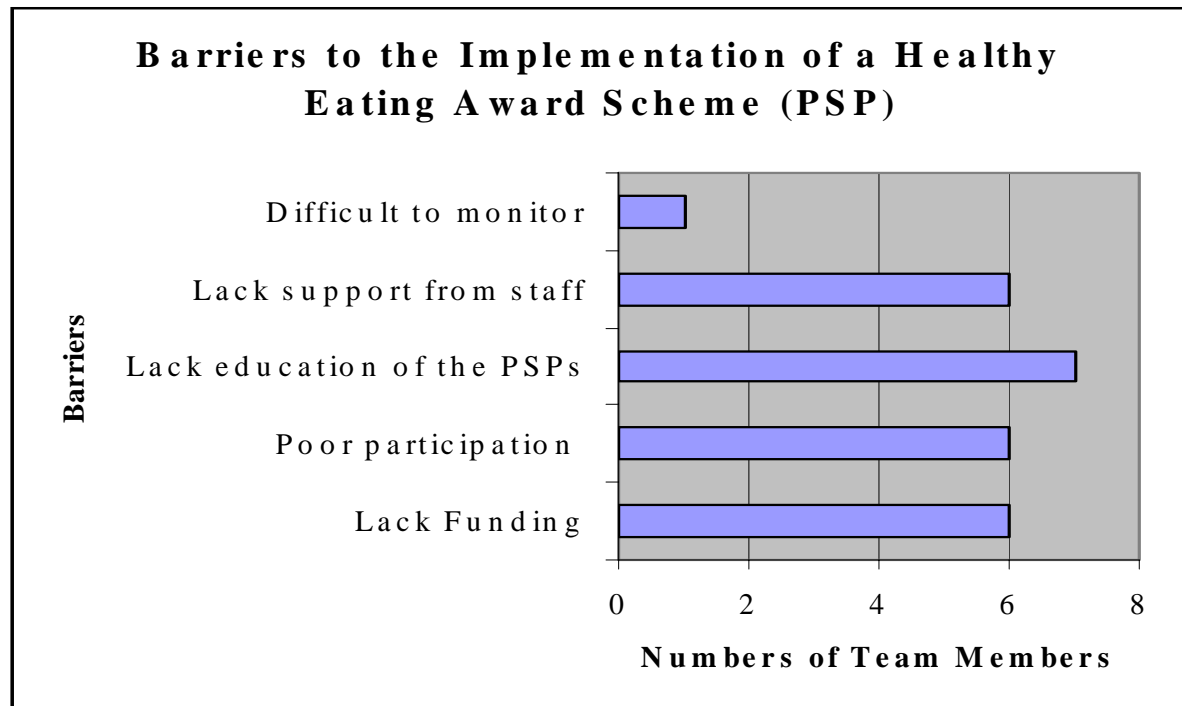
Pre-school Team Members: (PST) (n=9)

1. 89% of the subjects were aware of the concept of a healthy food incentive scheme for pre-schools, crèches and childminders.
2. 55% thought that an award scheme would be best, 33% said an initiative would be best, and 11% thought that recognition for healthy food provision would work best in the pre-school setting.
3. 100% of the PST members believed that the scheme would be;
 - Useful in the education of the pre-school providers
 - Act as an incentive for PSPs to have healthy eating policies in place
 - A health promotion strategy that could be implemented nationwide
 - Help to improve the children's health education
4. 89% said that the scheme would be easy to implement
5. 11% said that it would not be a health promotion strategy that could be implemented nationwide
6. 11% of the PST members believed that it would be difficult to get funding for the scheme
7. Table 1: Barriers to implementation of healthy eating scheme (n=9). See graph 1 also.

Table 1:

Barriers to Implementation	YES	NO
Lack of funding	6	3
Poor participation and motivation	6	3
Lack education of PSPs about healthy eating	7	2
Lack of support from staff	6	3
Difficult to monitor scheme	8	1

Graph 1:



8. 100% of the PST members believed that recognition by a certificate for the pre-school, and media coverage would encourage pre-schools to take part in a healthy food scheme.

9. 77% of the PST members believed that an annual ceremony to mark participation and individual certificates for the children would be appropriate.

10. When asked what kind of additional support would be needed to ensure the correct implementation of the scheme the results were as follows;

- Parents must support the scheme. This will only be achieved through fully educating the parents themselves on healthy eating and its importance in the pre-school child
- All health professionals involved in child care, working together as part of a multi-disciplinary team
- Thorough training of staff in pre-schools

- The importance of healthy eating should be taught as part of the third-level curriculum to students in third level
- Proper cover should be provided for child-minders who are participating in training
- A development worker should be involved
- Funding for training and courses and funding for the whole scheme should be provided
- PSPs, caterers, and parents would need education on appropriate cooking methods e.g. baking, steaming, grilling instead of frying of food
- Scheme should be monitored closely by an authoritative body

11. When asked what name the scheme should be called ;

88% said “award” or “initiative”. The reasons given were that “award” has more prestige associated with it, and also because children love to be rewarded or awarded for their efforts. An award implies that a service has “won” in something, and it may exclude other services who did not win. “Initiative” would be a better word to use in the title, because it refers to work being acknowledged and encouraged.

22% said that the scheme should not be called an “award” because individuals should not be rewarded for healthy eating when it should be an integral part of daily living, and it requires constant review to check if standards of the award are being maintained.

12. Further comments about the scheme were as follows;

- “The sooner the better”!
- It “should be expanded to national schools”
- The scheme should include every size of pre-school, from the very small to the very large services
- The scheme should incorporate ethnic diets, and special dietary needs (e.g. diabetics, coeliac)
- The basic education of parents and staff at ground level should be done before such a scheme is implemented

- It is “too late to bring in healthy eating when children are in primary and secondary school”
- A dietitian should be available to oversee the implementation of the scheme
- A healthy eating award should only be given to pre-schools where “they are compliant in other areas” e.g. health and safety, food hygiene etc.
- There may be the barrier of the “perceived cost of providing healthy eating within the pre-school providers”. Some may think it will cost their service a lot to have healthier options on the menus
- The inspection form of the public health nurses, and the environmental health officers could include a section for the monitoring of the award scheme
- The social context of the pre-school would be important to consider. The healthy eating guidelines in the scheme may be contradictory to the nutritional knowledge and dietary practices of the parents
- “Every pre-school needs varying degrees of support”

Pre-school Providers (PSP) (n=17)

1. 100% of the PSPs thought the training helped them to provide healthy food and drinks for the children in their service

2. Ideas put into practise:

88% said they started to include exercise into the daily routine

100% said they had started to provide healthy snacks (juicy, thirsty, smooth, crunchy, chewy)

100% said they had started to provide menus based on the food pyramid

65% said they had started to educate the children themselves on the food pyramid

100% said they had started to provide healthier drinks (e.g. water and milk instead of squashes and juices)

82% said they had started to put the ideas about dealing fussy eaters into practise

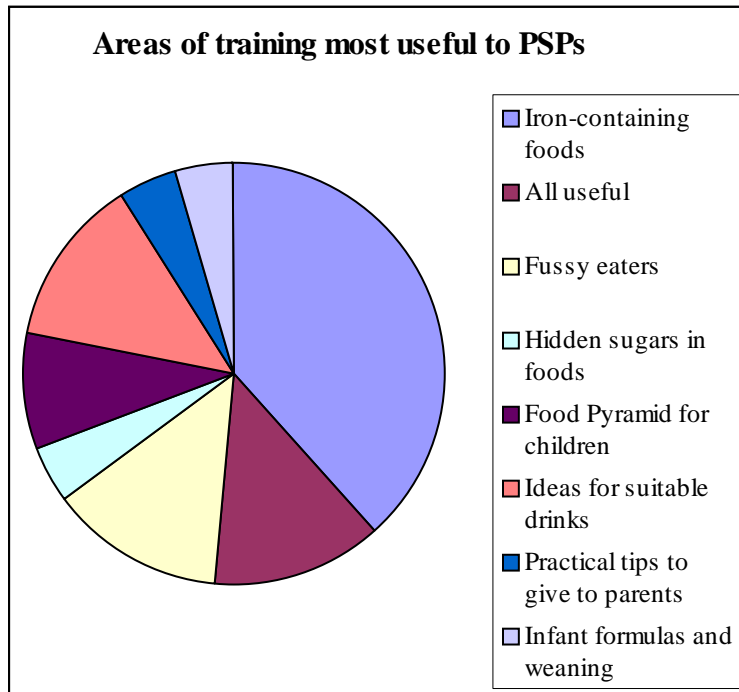
94% said they had started to provide children with more iron-containing foods

94% said they had started to offer alternative rewards to children instead of “treat” foods

3. The areas covered in the training which were found to be most useful were: (See also graph 2)

AREAS OF TRAINING MOST USEFUL TO PSPs	
Iron-containing foods	52%
All useful	18%
Fussy eaters	18%
Hidden sugars in foods	6%
Food Pyramid for children	12%
Ideas for suitable drinks	18%
Practical tips to give to parents	6%
Infant formulas and weaning	6%

Graph 2:



4. 71% of PSPs had started to develop a healthy eating policy after they completed the training.

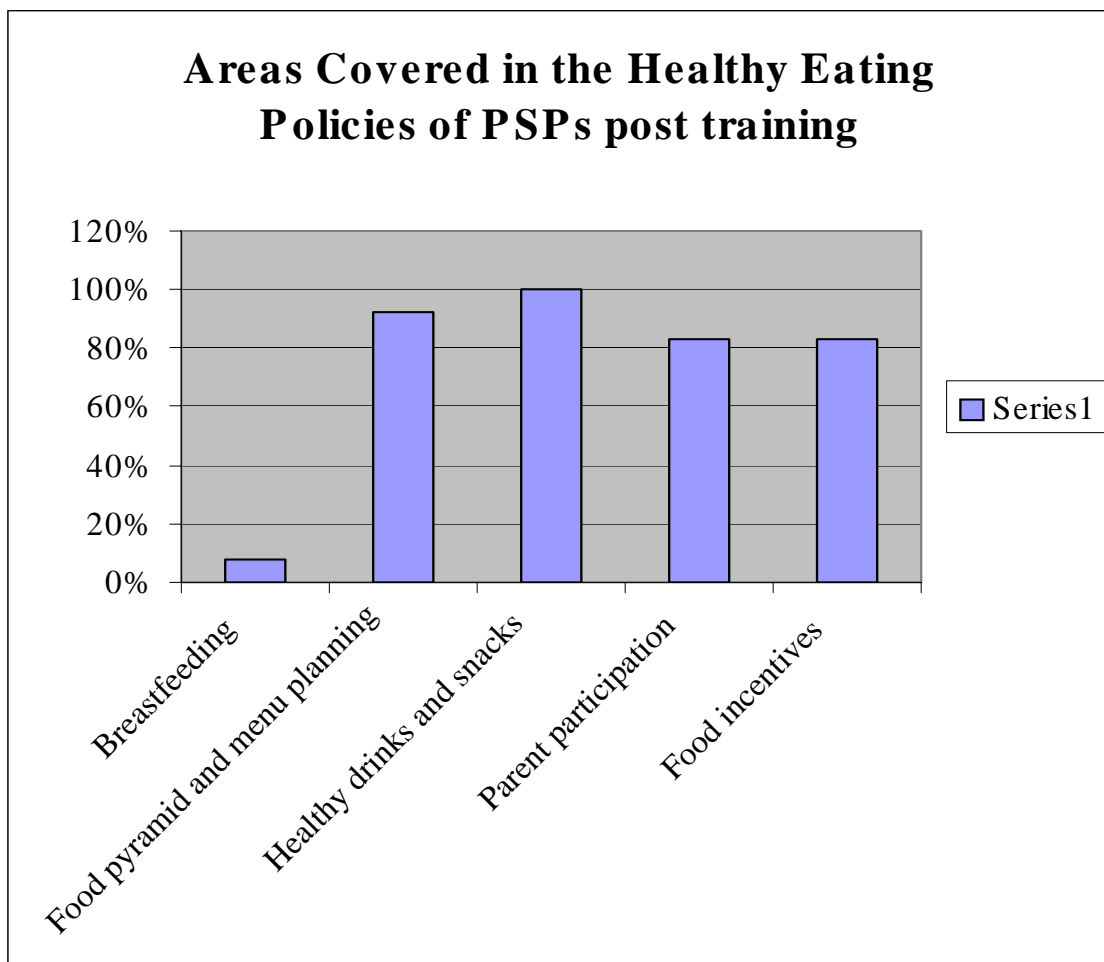
The reasons given for not having started to implement the policy were as follows;

- “Too busy coming up to Christmas”
- “Lack of time”
- One pre-school already had a healthy eating policy in place and felt it was not necessary to make any changes
- One PSP was “only involved in the catering end of things” and was “not involved in policy making”
- One person was no longer involved in child care

5. Of the 12 PSPs who had developed the policy, the areas covered were as follows: (See graph 3 also)

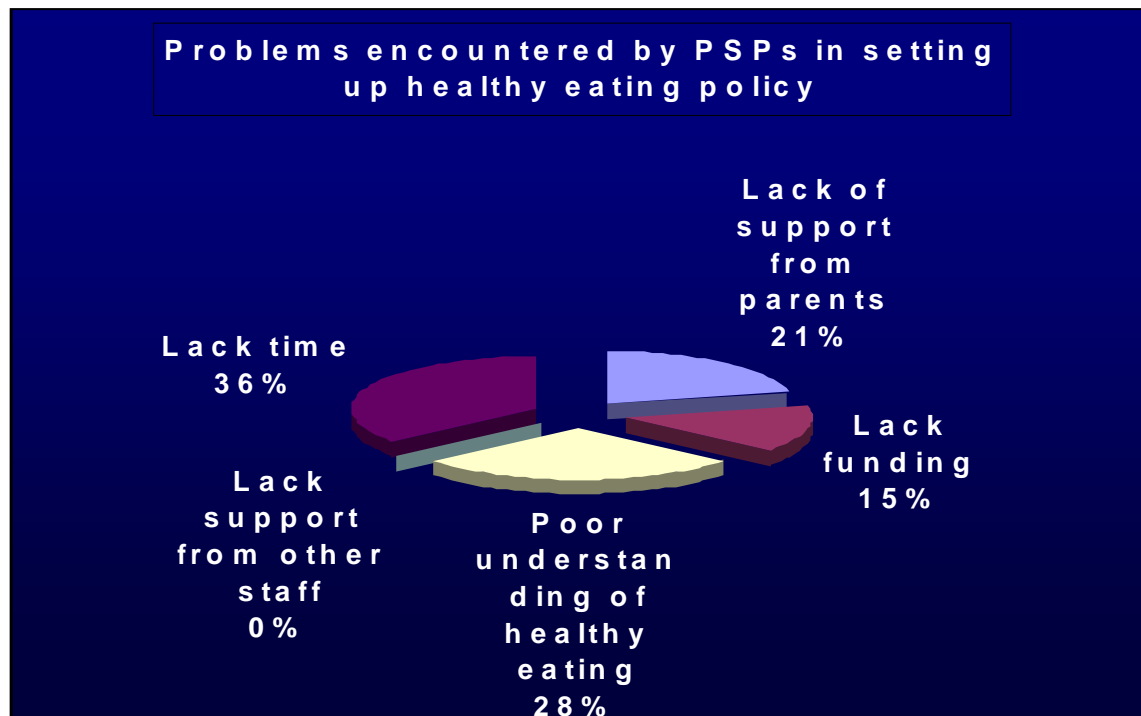
- Only 8% had included breastfeeding in their policy
- 92% has included the food pyramid and menus based on the pyramid in the policy
- 100% had included the provision of healthy drinks and snacks
- 84% said that parent participation was part of their policies
- 84% had included food incentives and treat foods in the policy

Graph 3:



6. When asked about the problems that they had encountered when setting up the healthy eating policy the results were as follows:

Graph 4:



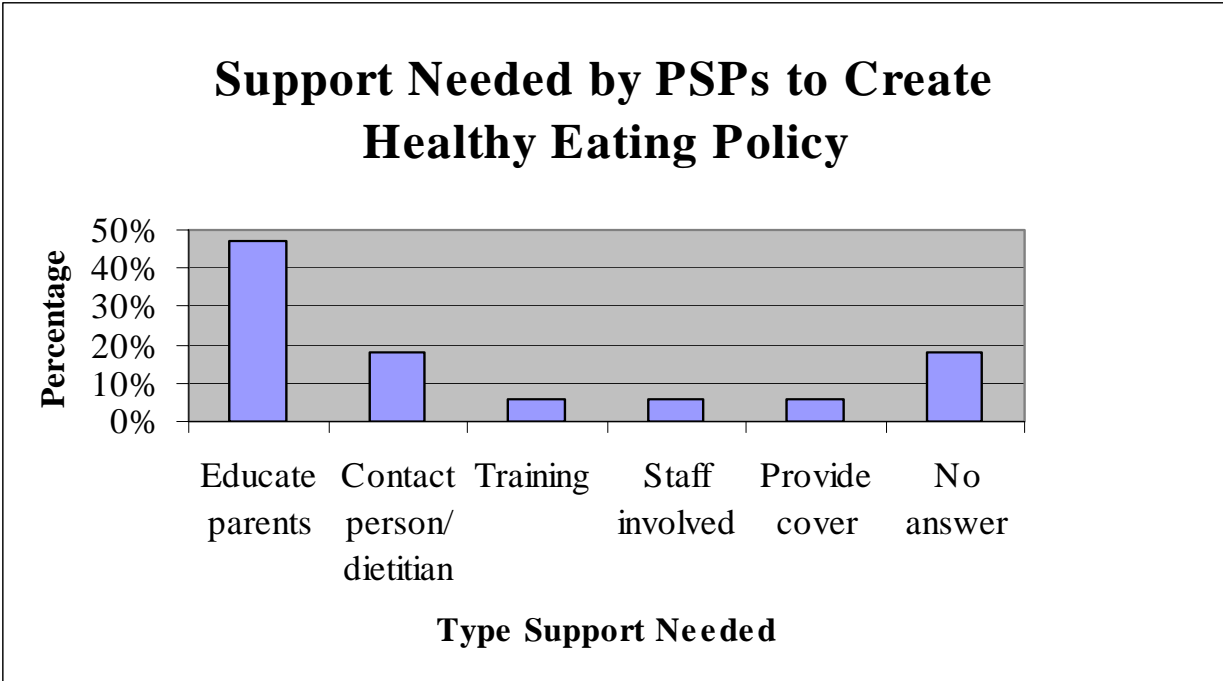
7. 84% reported that the healthy eating policy was easy to achieve. 42% said it was extra work for them

8. When asked what kind of additional support the PSPs thought they would need to set up a healthy eating policy the results were as follows;

- 47% said that support from the parents by educating them about the importance of healthy eating was necessary
- 18% said that a contact person or dietitian should be there to help set up a policy
- 6% said that more training needed to be provided – specifically for policy development
- 6% said that staff participation and motivation would need to be very high to set up policies

- 6% said that cover must be provided to allow staff to attend training days and to set time aside to develop policies
- 18% did not provide an answer to this question

Graph 5:



9. 100% thought that the training they received was of benefit to them as a business
10. Other comments which the PSPs had to make included;
 - The information pack and booklets given during and after the training were an excellent help
 - It would be useful to send healthy eating information out to *every* pre-school service, whether they attended the training or not, so that they can pass on the information in turn to the parents
 - 12% said that the training should have been extended to run over a longer time e.g. 2 days
 - Continuous training should be provided, and 24% said that it would be worthwhile to run another training day as a “refresher course” to keep information and education up to date

- Some PSPs did not get to attend because it was run during the day. It would be ideal if the course was run at night
- 24% said that the food and nutrition training should be linked in with a course on food hygiene

11. 100% of the PSPs said that it would be a good idea to have a scheme started up that acknowledged pre-schools who fulfilled healthy eating criteria.

VI. Conclusion and Discussion

The pre-school years are a great time to help children form positive attitudes towards food and physical activity and to develop good eating practices. During this time, children are very open to learning new ideas and concepts. Pre-school can provide an opportunity to learn about food types, where food comes from, how it grows, general good health and food cultures. Learning how to choose and enjoy many different nutritious foods in early childhood can provide the foundation for a lifetime of healthy food choices (DOH, 1999). If we can target children before they enter primary schools, we have a better chance of succeeding with implementation of healthy eating guidelines.

There is certainly a need for a comprehensive large-scale study into the dietary habits of pre school children, to analyse the exact nutritional content of children's diets. With this information on board, we can begin to identify areas which need to be addressed, and from there, produce policies and schemes to combat these inadequacies.

One of the main conclusions, which can be drawn from this study, is the fact that the training day was a great success. All PSPs felt it had helped them to provide adequate healthy food and drink options to the children in their service. Most ideas from the training were put into practise by the PSPs. 71% of the PSPs had begun to start developing a policy as a result of the training. All PSPs said the training was useful to them as a business. The information packs provided were excellent and were an important resource to use as a reference tool after training. It was frequently mentioned that another training day should be organised, to refresh information and expand knowledge. From this perspective, it can be seen that the training was a very useful educational tool.

A lack of time and poor understanding of the PSPs of the importance of healthy eating are the major barriers to implementing a healthy eating policy. The PST members cited that a lack of education of PSPs about the importance of healthy eating would be a huge barrier to setting up a healthy award scheme. We can therefore conclude that education of the PSPs is a foundation to both policy implementation and the award scheme. This highlights the fact that the PSPs need to

be trained properly in the area of nutrition, and also that PSPs need to allow time to draft up a policy, with the appropriate cover being provided.

83% of the PSPs reported that it was easy to set up a healthy eating policy and the majority did not see it as extra work for them. This implies that having such a policy is an achievable goal to set for all pre-schools. The correct support mechanisms need to be in place for the successful running of the policy. This includes regular staff training, parents' education, cover being provided to draft a policy, and a contact person being provided to help with its implementation.

The PST believed that the food award scheme would not be difficult to monitor, but it would be difficult to get funding for, and participation would be a barrier to setting the scheme up. However, almost all of them agreed that it is a health strategy that should be started up nationwide.

The PST members also suggest that appropriate resources, the involvement of all health professionals in a team approach, and the inclusion of healthy eating for third level childcare students is needed for the award scheme. The term "award" seems to be the best name to call the scheme, because of the prestige associated with it. A certificate of recognition and media coverage would be the biggest incentives for the pre-schools to take part in the food award scheme.

Most of the PST believed that it would not be difficult to get funding for the scheme, but 6 of the 9 PST cited lack of funding as a barrier to its implementation. This highlights the fact that funding seems to be a huge issue for such a scheme to be put in place. A scheme like this would certainly need the support of the health department, with adequate funding and recognition of its importance from the Irish government.

Not all PST members were aware that other schemes exist already in national schools, as one member suggested that this pre-school award scheme be expanded to other age levels. It is extremely important therefore, that all PST members are aware themselves of the types of healthy eating initiatives in schools and other settings. The "whole-team approach" seemed to be

a very important aspect of implementation according to the PST, where all health professionals must work together to achieve the award scheme being set up.

The overall impression from the questionnaires from the pre school team and the pre-school providers is that a healthy food award scheme in pre schools is extremely important and is necessary to implement. It is too late to bring in the concept of healthy eating in primary or secondary schools, where the dietary habits and exercise patterns of children have already been formed. The education children receive about healthy eating in school will be brought home to their parents and the messages are again reinforced. Parents will support any worthwhile health incentive, if they see it is beneficial to their child.

Research into school-based intervention schemes for healthy eating demonstrate that the school is the perfect setting for teaching children about good lifestyle practices. Interventions such as a healthy eating food award scheme should be sustainable and long-lasting if the benefits are to be seen. Initiatives should involve all children in a school, should target the whole environment, and be behaviourally focused (Warren *et al*, 2003).

VII. Recommendations

- Every pre-school establishment should have a healthy eating policy
- The healthy eating policy should be developed within the pre-school setting between child carers and parent. It is best to have a written healthy eating policy for the pre-school.
- The policy drawn up should be agreed guidelines between parents, pre-school providers, and per-school inspection teams.
- Ensure all members of staff are familiar with the healthy eating policy and are willing to work within the agreed guidelines.
- Establishment of a core committee for monitoring and evaluation of healthy eating policy and the award scheme
- Each member of the pre school team should be aware of each other's roles, and how they fit together to work as a team
- Staff (PSPs) should receive regular training from the health care professionals (dietitian, public health nurse, environmental health officer) to provide ongoing education and support, and to ensure the staff are confident implementing the healthy eating policy and the "Healthy Food Award" scheme.
- Provision of nutrition and hygiene education to staff working in the preschools, both carers and caterers.
- More emphasis should be placed on educating pre-school children about the food pyramid itself
- Breastfeeding must be an area covered in a healthy eating policy
- Dietitian/contact person/authority to oversee project and policy implementation
- Communication with other pre-schools who have been successful in setting up an award scheme would be useful for the pre-school providers. Any problems they encountered, how they were overcome, and any future plans which will be made would help the pre-school to achieve the policy and the award scheme.
- A clear set of criteria should be defined before the award is given

- A school by school approach to introducing changes means that each preschool’s strategy for improving food provision is “owned” by the pupils, parents, caterers and preschool providers.
- In the UK there is a special School Nutrition Advisory Group (SNAG) set up to promote and provide information on healthy eating in schools. It also incorporates pre-schools and nursery schools. It would be very useful to set up such a scheme here in Ireland for pre-schools, as it could help with setting up and promoting healthy eating and physical activity in young children, and also provide a supporting link for parents and preschool providers.
- A publicity campaign to engage participation of preschools in the award scheme would give the scheme both media attention and would increase the number of participating schools
- Identification of supporting resource requirements for nationwide implementation of a recognition scheme.
- Identify gaps in resources and training programmes required to support the running of the award scheme.
- Community recognition of the award
- Incorporating the guidelines of the Happy Heart Catering Awards into the overall preschool healthy eating scheme
- Adequate funding from the government is an issue, which the pre-school team seemed to think, would be a barrier to implementing the award scheme. The government and other bodies must be aware of the importance of healthy eating in this age group and its implications on the health system for the future
- Constant review and monitoring of the award, once an establishment has achieved the award
- There must be a “whole-team” approach to the implementation of both the healthy eating policy and the healthy eating award scheme. PSPs must work with parents and the PST to achieve policy execution. Within the PST, all allied health professionals must work together to accomplish the policies and award scheme
- A copy of the policy for the “Healthy Food Award” scheme should be given to all parents of the pre-school children involved. This will encourage parents to ensure their child is

following healthy eating guidelines, and it provides the parents with education and information for the reasons behind the award.

- The progress of the healthy eating policy and the effectiveness and implementation of the “Healthy Food Award” scheme should be monitored on a regular basis. Any problems identified should be brought to the attention of the team and addressed accordingly.
- A follow up of how effective the award scheme has been within the pre-school setting is also important. It would be necessary to investigate the impact the scheme has on the nutritional education of the children, their eating habits, their attitudes towards healthy eating, and their level of physical activity.

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IX. Appendices

Appendix 1:

Sample Pre-school Healthy Eating Policy (DOH, 2004).

- Mothers will be supported to continue breastfeeding their children.
- Infants will be held upright while bottle-feeding. No bottles will be propped.
- Formula milk feeds for infants will be provided by parents and ready to use. Staff will not make up formula feeds.
- A weekly menu will provide the children with varied foods. This menu will be on display in advance. Recipes and food ingredients are available to parents.
- Parents are encouraged to offer menu suggestions or comments on the nutrition policy.
- All children will have suitable food available depending on their age, development and needs. Using the recommended servings table as a guide.
- Breakfast will be available each morning. Parents are responsible to inform the pre-school if their child needs breakfast on arrival.
- Full fat milk will be served with morning and afternoon snacks. A low-fat or semi-skimmed milk option will be available at parents' request for children over 2 years of age, who eat a varied diet.
- Water will be available at all times.
- Fizzy drinks and fruit squash will not be provided.
- Diluted pure unsweetened fruit juice will be served with main meals.
- Children will have access to bread or fruit if they are hungry between scheduled meal and snack times.
- Children will be allowed to have dessert if they do not eat their main course.
- Parents will be advised if their child is not eating well.
- Parents of children on special diets will be asked to provide as much information as possible about suitable foods. In some cases, parents may be asked to provide food themselves.
- Carers will sit with the children while they eat and encourage good eating habits.
- Children will sit when eating or having a drink.

- Withholding food will not be used as a form of punishment.
- Parents are asked not to send sweets, crisps and other snack foods to the pre-school.
- Birthday party food should be discussed in advance with the staff.
- All food in the pre-school will be stored, prepared and served using good food safety
- Staff will receive training in relation to healthy eating and food safety.
- Children will be encouraged to play outside every day, weather permitting, to ensure they receive sunlight, which helps their bodies make vitamin D.
- This policy will be displayed in the reception area. It will be reviewed annually.

Appendix 2:

Telephone Questionnaire: Pre-school Providers

1. Do you remember taking part in the pre-school nutrition training day?

Yes No

2. If yes, would you mind answering some questions about the training?

Yes No

3. Do you think the training day has helped you to provide more healthy food and drinks for children in your service?

Yes No

4. What ideas from the training have you started to put into practise?

- ◆ Including exercise into the daily routine Yes No
- Providing healthy snacks (e.g. juicy, thirsty, smooth, crunchy, chewy snacks)? Yes No
- Providing healthy menus based on the food pyramid?
 Yes No
- Education about the food pyramid for children Yes No
- Providing healthier drinks (e.g. water and milk instead of squashes and juices) Yes No
- How to deal with fussy eaters Yes No
- Providing children with more iron containing-foods i.e. red meat) Yes No
- Alternative rewards offered instead of 'treat' foods Yes No

5. What areas of the training did you find most useful

6. Have you started to develop a healthy eating policy / healthy eating guidelines?

Yes

No

If no: why not?

Continue to question 10

7. If yes, which of the following areas have you covered in your policy?

- ◆ Breastfeeding Yes No
- ◆ The food pyramid & menu planning Yes No
- ◆ Healthy drinks and snacks Yes No
- ◆ Parent participation Yes No
- ◆ Food incentives Yes No

8. Have you come across any problems in setting up the healthy eating policies in your practise?

- Lack of support from parents Yes No
- Lack of funding Yes No
- Poor understanding of the importance if healthy eating in the pre-school setting Yes No
- Other staff not providing enough support Yes No
- Lack of time Yes No

9. Have you found that setting up healthy eating policies in your practice has been:

- Easy to achieve Yes No
- Has been extra work for you Yes No

10. What kind of additional support do you think you would need to create a healthy eating policy in your service?

11. Do you have any other comments about the training you received e.g. areas that should have been included, areas which require more training on etc.?

12. If a scheme was started to acknowledge pre-schools that fulfilled a healthy food standard criteria, do you think it would be a good idea?

Yes

No

Appendix 3:

Telephone Questionnaire: Pre-school Team

1. Have you heard about the concept of a healthy food incentive scheme for pre-schools, crèches and childminders?

Yes

No

2. What kind of scheme do you think would work best in the pre-school setting?

- An award scheme Yes No
- Taking part in a ‘healthy eating initiative’ Yes No
- A recognition for healthy food provision Yes No

3. Do you think such a scheme in the pre-school setting would be:

- Easy to implement Yes No
- Useful in the education of the pre-school providers Yes No
- Act as an incentive for pre-school providers to have healthy eating policies in place Yes No
- A health promotion strategy that could be put into action nationwide Yes No
- Help children become aware of healthy eating, thereby improving health education Yes No
- Difficult to get funding for Yes No

4. What kinds of barriers (if any) do you think would occur in setting up a “Healthy Food Award” scheme in the pre-school setting?

- Lack of funding Yes No
- Poor participation and motivation Yes No
- Lack of education of the pre-school providers about the importance of healthy eating Yes No
- Lack support from other members of staff Yes No
- Difficult to monitor Yes No

5. What incentives do you feel would help encourage pre-schools to take part in such a scheme?

- Recognition by a certificate Yes No
- Individual certificates for the children Yes No
- Media coverage Yes No
- An annual ceremony to mark participation Yes No

6. What kind of additional support do you think would need to be involved to ensure the successful running of the “Healthy Food” scheme?

7. Do you have any suggestions as to what the scheme should be called? For example, ‘award’, ‘participation’, ‘initiative’ etc.

8. Do you have any further comments to make about the “Healthy Food Award” scheme and its implementation in the pre-school setting?
