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Partnership between authorities and NGO'S in developing healthy eating at school - the Danish experience.

Poster to the European forum on eating at school- making healthy choices.

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COUNCIL OF EUROPE CONSEIL DE L'EUROPE



**THE EUROPEAN FORUM ON
EATING AT SCHOOL –
MAKING HEALTHY CHOICES**

PROCEEDINGS

Strasbourg, Council of Europe, 20 and 21 November 2003

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PROGRAMME

Forum on eating at school - making healthy choices

Aims of the Forum

To:

- promote healthy eating in schools as an integral part of healthy life-styles;
- foster co-operation among the actors concerned to enable schoolchildren to eat healthy meals in a pleasant environment at their school;
- review different European approaches to school food and nutrition, highlight problems, identify best practices and make proposals for follow-up activities to be pursued by the Council of Europe.

Participants

People involved in the field of food and nutrition in schools including pupils, parents, teachers, school managers, caterers, health staff, administrators and policy makers.

Speakers

Principal actors in the field of food and nutrition in schools.

Poster presentations

Posters and nutrition education materials will be exposed in the Forum meeting room on session themes.

Languages

English and French.

Organisers

Partial Agreement Division in the Social and Public Health Field of the Council of Europe and Regional Office for Europe of the World Health Organization.

Co-ordinator and Forum Chairperson

Dr Bent MIKKELSEN, Danish Veterinary and Food Administration.

General Rapporteur

Mr Ian YOUNG, Development Consultant – Europe, NHS Health Scotland.

Date and place

20 and 21 November 2003 - Council of Europe, Palais de l'Europe
(Room 5), Avenue de l'Europe, Strasbourg, France.

Lunch

Participants will be informed about lunch facilities at the Council of Europe.

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The organisers wish to thank:

the French Ministry of Health for its financial support enabling representatives of a
number of central and eastern European countries to attend the Forum;

SCOLAREST for its sponsorship in organising the fruit breaks.

1st day – 20 November 2003

09.30 Registration

10.45 **OPENING SESSION**
Chair of the Forum

Dr Bent MIKKELSEN
Head of Catering Section
Nutrition Division, Danish Veterinary
and Food Administration

11.00 Welcome address

Representative of the Secretary General
of the Council of Europe
Dr Peter BAUM
Head of Partial Agreement Division in
the Social and Public Health field

11.10 "Young Minds 2002 - 2003":
Forward ever, backward never

Ms Sarah HUNTER
Ms Tara McARDLE
Pupils of Plockton High School, Scotland

11.30 Opening address
*Health behaviour and nutrition
among school-age children*

Dr Lea MAES
Professor of Health Promotion &
Medical Sociology, Department of
Public Health, Gent University,
Belgium

11.50 Keynote address
Eating at school: a European study

Mrs Fannie DE BOER
Senior Nutritionist
International Agriculture Centre,
Wageningen University and Research
Centre, The Netherlands

12.15 Lunch

INTRODUCTION

SESSION No. 1

HEALTHY EATING IN SCHOOLS

The promotion of healthy eating in schools is a cause of much public debate these days among the many players in the field: nutrition/health educators; school authorities; parents; students and governments. Issues being discussed are: the increasing prevalence of overweight linked to food choice and physical activity patterns of youngsters; how to provide healthy food in schools; how to deal with children who demand free choice of snacks and drinks in school; private or public companies providing warm meals and which national strategies a government should develop. At the core of this debate stands one central issue: what is a healthy meal or healthy school food? Does such a thing exist, considering the many different ways of providing food in schools and the many different cultural traditions across Europe? And if so, which guidelines are relevant?

The first session of this Forum explores the different nutritional and health aspects of eating in school.

The first presentation will focus on the central question of what a healthy school meal is. It will be illustrated by Germany, where national guidelines are being developed considering the different ways of providing healthy food in school. What is a warm school meal's contribution to the daily food intake of school aged children? How do packed lunches fit into a healthy daily food intake? Can vending machine for foods or drinks contribute to a healthy food choice or not?, are some of the issues discussed.

The second presentation gives the example of national nutrient-based standards for school meals from Scotland. How were they developed, what was the rationale and how will they be implemented?

The third presentation will focus on how schools can influence children's food choice and improve their daily diet. Examples of national strategies from Portugal will be given.

What do you think?

- There is no such thing as a healthy school meal.
- Nutrient-based guidelines are not essential in developing national strategies.
- Fatty snacks should not be allowed in schools.
- Soft drinks should be banned from schools, like they were in California.
- Providing breakfast in schools contributes to a healthy diet.
- National school fruit /vegetable schemes are a must; children will not reach their recommended intakes of these foods otherwise.
- Parents, not school authorities, should be responsible for providing meals.
- School children should have free food choice in schools; it is paternalistic to have restrictions.

**SESSION No. 1 - HEALTHY
EATING IN SCHOOLS**

Facilitator:

Mrs Jeltje SNEL

Programme Manager, School Nutrition
Education, Netherlands Nutrition
Center

- | | | |
|-------|---|--|
| 14.00 | Is there a healthy school meal? | Prof. Dr Ines HEINDL Universität Flensburg Germany |
| 14.15 | Hungry for success: A whole approach to school meals in Scotland | Mrs Gillian KYNOCH Scottish Food and Health Co-ordinator, Scottish Executive Health Department |
| 14.30 | How can the school influence children's food choice and improve their diet? | Prof. Dr Isabelle LOUREIRO Co-ordinator of Health Promotion and Protection School of Public Health Portugal |
| 14.45 | Discussion | |
| 15.30 | Coffee/tea/fruit break | |

INTRODUCTION

SESSION No. 2

HOW TO PROVIDE HEALTHY FOOD IN SCHOOLS

Promoting healthy eating is not only a matter of nutritional knowledge. It is also very much about creating the organisational and physical environment for developing and maintaining healthy food and meal service in schools. At a time where the responsibility for healthy meal provision seems to be shifting from the parents to the schools this is becoming even more important

This session explores the different ways in which food and meal service are organised in countries across Europe. From the hot lunch type of school meal served in canteens and cafeterias in countries like Finland, France, Sweden and the United Kingdom to the home-made lunch boxes, fruit breaks, fruit and snack outlets that are the predominant food options in countries like Denmark and Norway. The session will especially focus on variations of these generic types that can promote healthy eating.

In many countries contract caterers play a dominant role in providing food and meals at schools. Therefore the session also takes a closer look at the interplay between public and private partners and will try to highlight the contribution that private operators can make in providing healthy meals in schools.

What do you think?

- A single fruit from a fruit break does not make a significant contribution to the total diet and can therefore be disregarded. It is the total diet that is relevant.
- Fruit breaks are important because they contribute to the creation of good "5-a-day" habits.
- School canteens are the best way to provide food because it also teaches good eating habits and because it is the most important source of energy.
- Snack and take-away types of food provision should be avoided because they usually also include a lot of unhealthy foods.
- The free choice between unhealthy and healthy food should be a cornerstone in school catering.
- The lunchbox is a good option, so let's stick to it. If parents haven't got the time for making a healthy lunch box – they should not be parents.
- If we want to develop healthy meals and eating options for school kids we need to involve the kids.

- We need private companies to meet the rapidly growing need for school meals.
- Private caterers are better at developing new and healthy meal services.
- There is a limit to the private caterers' ability to promote healthy choices on the menu because they have to make a profit.
- Provision of meals must be a public responsibility – it cannot be handed over to private companies.

**SESSION No. 2 - HOW TO
PROVIDE HEALTHY FOOD IN
SCHOOLS**

Facilitator:

Mrs Vivian BARNEKOW RASMUSSEN
Technical Adviser, Health Promotion
and Education, World Health
Organization

- | | | |
|-------|--|--|
| 16.00 | Healthy eating in the traditional school meals system. The role of the private food service operator | Mr Richard COUDYSER Director General, Local and Regional Authorities and Schools, Sodexo France |
| 16.15 | How to provide healthy food in schools: School fruit programmes as a short cut to promoting healthy eating in schools – The Norwegian experience | Mrs Anniken OWREN AARUM Adviser, Directorate for Health and Social Affairs Norway |
| 16.30 | The home – made lunch box – has it got a future? | Mrs Doris KUHNESS Manager, Programme "Healthy school", Styria vitalis, Austria |
| 16.45 | Discussion | |
| 17.30 | Poster presentation | |

18:15

Reception offered by the Secretary General of the Council of Europe at
the Council of Europe Restaurant

INTRODUCTION

SESSION No. 3

WHOLE SCHOOL APPROACH

The school is an ideal setting for health promotion, namely by creating a friendly environment in as far as food habits, nutrition education and physical activity are concerned.

The existence of infrastructures, educators and other school staff provides educational opportunities, knowledge acquisition and allows the development of competencies as well as enabling the establishment of links with the families and local communities. A whole school approach, based on the provision of food and meals, social interaction, knowledge transmission and the creation of opportunities for physical activity, is an excellent means of improving the quality of life of the school population.

This session deals with the subject of school health policies aiming to improve the well-being of its population and discusses the role of the various "actors" involved as well as the need of coherence at the different levels of the process.

What do you think?

- Each school needs to define its health policy in order to effectively promote the health and well-being of the school population.
- To be effective, any school intervention in the field of nutrition and physical activity needs to take into account the specificities of the various groups involved.
- In the whole school approach, the "taught curriculum" needs to be matched by the "hidden curriculum".
- Projects which involve schoolchildren, teachers, other school staff, families and local community members are impossible to conduct as each group has different needs and wants.

2nd day – 21 November 2003

SESSION No. 3 - WHOLE SCHOOL APPROACH

Facilitator:

Prof. Maria Daniel VAZ DE ALMEIDA
Head of the Faculty of Nutrition and
Food Sciences, University of Porto
Portugal

- | | | |
|-------|--|--|
| 09.00 | School Food Policy: Linking with the Netherlands Healthy Schools Action Programme | Mr Goof BUIJS (Ir.) Senior consultant, National Institute of Health Promotion and Disease Prevention, The Netherlands |
| 09.15 | Promoting good personal health care and healthy consumption habits through a good school climate | Mr Jean-Claude VUILLE Professor Emeritus in Social Paediatrics Department of Public Health, Switzerland |
| 09.30 | Health and education intersectorial role of school nutrition and nutrition education | Dr Irena SIMCIC Senior Advisor for School Nutrition, Board of Education, Institute of Education, Slovenia Ms Cirila HLASTAN-RIBIC Counsellor to the Minister Ministry of Health Food and Nutrition Department Slovenia |
| 09.45 | Discussion | |
| 10.30 | Coffee/tea/fruit break | |

INTRODUCTION

SESSION No. 4

PARTNERSHIPS FOR HEALTHY CHOICES

Food and nutrition in schools is an area which involves many partners at different levels of society. Cross-sector collaboration is essential when developing national and regional policies for food and nutrition in schools. The involvement of experts from the education sector, the health sector and the food sector is crucial to ensure a high quality guidance for schools when developing their own food policies.

Developing partnership at the school level is also a multifaceted exercise. School caterers should be interacting with school management, staff, students and other users of the school lunch break food facilities - a sustained dialogue is important in order to ensure not only a high quality diet, but also to ensure that the food offered is appetising and the surroundings for the lunch break are pleasant.

The active involvement of parents and students is a prerequisite for developing successful food and nutrition policies for schools. Students should be considered equal partners in this process. Their contribution and involvement will ensure a successful implementation of such policies to the daily school life.

What do you think?

- School meals are the business of parents, not of society.
- Teachers and students should not waste time on being involved in school meal planning – they should focus on teaching and learning.
- School children know what they like and are therefore the best experts on school meals and lunch breaks.
- School children do not have a sufficient nutrition background to be involved in planning school meal policies.

SESSION No. 4 - PARTNERSHIPS FOR HEALTHY CHOICES

Facilitator:

Mrs Cristine DELIENS

Project Leader, Education and Health
Coordination, Belgium

- | | | |
|-------|--|---|
| 10.50 | We decide what we eat: Active involvement of students in developing school meal policies | Mr Bjarne Bruun JENSEN Professor, Director Research Programme for Environmental and Health Education, Danish University of Education |
| 11.05 | Eating at school: The school and parents as partners: Utopia or reality? | Mrs Patricia MELOTTE Mr Christophe CONTENT Parents' association "Clair-Vivre" Pre-Primary and Primary School Belgium |
| 11.20 | National inter-agency co-operation regarding nutrition in schools | Dr Michel CHAULIAC Head of Nutrition Project Directorate General of Health, France |
| 11.35 | Discussion | |
| 12.30 | CLOSING SESSION Conclusions of the Forum with comments from the audience | Dr Bent MIKKELSEN Head of Catering Section Nutrition Division, Danish Veterinary and Food Administration |
| 12.45 | Close | |

SPEAKERS' PAPERS

OPENING SESSION

EATING AT SCHOOL – MAKING HEALTHY CHOICES

Dr Bent Egberg MIKKELSEN

Eating at school – making healthy choices

By **Dr Bent MIKKELSEN, M. Sc., Ph. D.**

Head of Catering Section, Nutrition Division
Danish Veterinary and
Food Administration

There is increasing focus on children's nutrition and health and in this respect school plays an important role. Thus, I am delighted that the Council of Europe has initiated work by experts designed to contribute to promoting healthier food in European schools.

I am also pleased – on behalf of the task force which has planned this forum – to be able to bid so many participants a warm welcome to this forum which I hope will make an active contribution to the Council's work in this area. In particular, I am extremely satisfied that so many European countries are represented and, thanks to the support of the French government, that it has been possible to welcome delegations from a number of East European countries.

I am very happy that the work of the Council of Europe's ad hoc group can take as its starting point the significant project which the European Network of Health Promoting Schools – ENHPS – has carried out, and continues to carry out, concerning the role of schools in health-promoting work. Nutrition, of course, is closely related to other health-promoting activities taking place in schools. I am especially pleased because we can draw on the experiences from the ENHPS co-operation with the Young Minds network.

This is important because the objective of healthy food at schools cannot be achieved by theorists and health professional alone sitting behind their desks. If the initiatives are to have an effect, they must be based on a collaboration with those who will put healthier ways of living into practice on a daily basis, not least the children. Thus, we must also send special greetings to Young Minds and their active participation in this forum.

Background

There are serious reasons for holding a forum such as this. The development in the eating habits of young people and nutrition-related diseases is alarming. Globally, the incidence of obesity has risen over the past 30-40 years, and the same applies to the incidence of associated diseases, for example diabetes type 2. WHO has identified the obesity epidemic as one of the biggest threats to human health and worldwide there are now more people who are overweight than underweight (WHO, 2000).

If obesity continues to increase at the same rate, up to 40 per cent of all Europeans will suffer from obesity by the year 2030 (IOTF/WHO, 2002).

It is particularly the increasing incidence of overweight and obesity among children and young people which is so worrying. In Denmark, there has been a threefold increase over the past 25 years (Danish Nutrition Council 2002). However, it is still worth noting that even though the principal problem here is excessive food consumption and an incorrect mix of foods combined with inadequate physical activity, insufficient food supplies are also a problem in some countries, in particular for socially vulnerable groups.

One of the areas which has received a lot of focus with regard to preventative strategies against obesity and overweight concerns the efforts being made at schools – here diet and nutrition at schools can constitute an important element.

Four important themes

As pointed out by Young (2002), among others food at schools is a complex phenomenon which does not just cover the food which is provided, but also the other activities connected to food including how diet and nutrition are included in the teaching. The planning task force has tried to ensure that this complexity is reflected in the forum's four sessions:

- Firstly, it is necessary to draw up an outline of health behaviour and nutrition among school-age children and then present the main results from the European survey which has been started on the initiative of the Council of Europe. This is done in the opening session.
- In the first session, we focus on the different nutritional and health aspects of eating in school. For example, must a fibre-rich diet be followed to a greater extent with more fruit and vegetables being consumed, combined with a reduced consumption of high fat, high-energy products? Must the intake of sugar in the form of soft drinks be limited, and if so, how? Is there a need for dietary standards at schools and what form can we envisage these taking? These are a few of the questions which need to be addressed in the first session.
- The second session will attempt to answer the following question: How to provide healthy food in schools? Despite the fact that school life varies enormously from country to country, there is one thing in common. Namely the fact that one cannot spend a long day at school without a proper lunch. However, the ways of meeting this need are, on the other hand, extremely varied. This applies just as much to the various eating habits as to the practical framework governing the consumption of food. The different practical arrangements range from schemes where the food is simply based on lunch boxes brought from home to those where snacks, finger foods and wraps are sold from tuck shops to well-established schemes where the food is centrally prepared and served in dedicated canteens. There is also a difference in whether the food constitutes a main meal or a morning snack or a between-meal snack just as there are numerous different traditions applying to the

financial subsidies given to the various schemes. In some countries school food is free while in other countries the pupils pay part or the entire cost of the food.

- In the third session we will look at how schools can try to integrate food served at school with teaching in nutrition and healthy dietary habits and an increased focus on physical activity at school. This will happen under the title "whole school approach". It is especially important to emphasise the significance of physical activity. One-sided efforts to benefit healthy food schemes and eating habits will only have a weak effect if they are not combined with more physical activity. The necessity of physical activity in combination with healthy nutrition is well documented (Mathiesen et al. 2003). Thus, it is important not to consider school food in isolation but to look at it as an integrated part of the other health-promoting efforts being implemented at schools. Here, it is worthwhile drawing attention to the initiative which the ENHPS network for health-promoting schools has taken in this area (Young, ENHPS, 2002).
- In the fourth and final session, we will focus on the question What action can be taken? Promoting healthy eating habits involves both individual and social strategies. Here, there are roles for both the public authorities at all levels, the health system, private organisations and industry. The concept of partnerships plays an important role in this respect. For none of the individual players can meet the huge challenge of working for healthier school food. NGOs and businesses are also important. I am very happy to see so many NGOs represented on the list of participants, and in particular that there are a number of catering enterprises at this forum which are actively supporting the idea of healthy food at schools in the form of presentations and sponsorships. The responsibility towards health which food enterprises have with regard to nutrition has received considerable focus within the past six months. Within the environmental area, we have for several years been seeing visionary companies taking the lead in promoting an environmental approach in their products and production, and we can now see signs that health concerns are spreading. In the USA, we have seen shareholders of food companies starting to demand that these companies take their responsibilities towards health seriously. I am convinced that partnerships with key players will be decisive for progress in this area.

It is important to emphasise that discussion and debate about the multifaceted subject of school food is important within this forum. Thus, time has been allocated for discussion as part of each session. It is our hope that participants will take an active part in these talks and that it will be possible to debate some of the expert statements as well as about the more controversial topics. For example, are school food and institutionalised meals the only correct solution to the issue of providing food at schools. And who after all should pay? Where does the boundary lie between parental responsibility and that of the schools and society at large? And can the food companies make a positive contribution in this area? Questions such as these are necessary to discuss if we want to be able to lay down a future strategy for healthy food in schools.

What comes next?

This forum is, of course, not a conclusion to the initiative which the Council of Europe has taken. The significant data about the subject which are being presented and all the good ideas, visions and proposals that are being made – all this will be included in the conclusions from the forum and in the work to follow. To begin with, the results will be compiled in a report, and later the task force will discuss which recommendations and practical guidelines are required.

It is also important that nutritional researchers take up the challenge concerning the need for research which will be identified, and that it takes place in a European collaboration. It is worth noting that a number of researchers are gathering after this forum to discuss the possibilities for being able to test some of the research challenges in concrete projects.

Acknowledgements

Before the day's programme continues, I would like to express my thanks to the Council of Europe's ad hoc group, Dr Baum and his secretariat and, last but not least, the task force which has maintained a remarkable level of activity and shown considerable creativity in the planning of this forum. I feel very lucky to be participating, and I am confident that we can continue to take advantage of the input from the ad hoc group in the future work after the forum. Special thanks are also due to Fanny de Boer who has conducted the European survey, the main results of which will be presented later in the course of this forum, as well as to Ian Young who is acting as the forum's rapporteur, and who will help to ensure that the results from the forum are compiled in a report that will serve as a foundation for the ongoing work.

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WELCOME ADDRESS

Dr Peter BAUM

Welcome address

By **Dr Peter BAUM**

Head of Partial Agreement Division
in the Social and Public Health field
DG III, the Directorate General for Social Cohesion
Council of Europe

Mr Chairman,
Ladies and Gentlemen,

May I welcome you to the Council of Europe on behalf of the Secretary General, Mr Walter Schwimmer. It is a great pleasure for me to be able to welcome you here today for the Forum on nutrition in schools organised by the Council of Europe in collaboration with the WHO Europe.

I would like to address the following two points:

Firstly,

The institutional context in which this Forum is taking place and

Secondly,

Situate the Forum in the more general context of our programme of activities in the sphere of public health and consumer protection.

With its 45 member states, representing a population of over 800 million, the Council of Europe is truly a pan-European intergovernmental organisation, which fulfils the following roles:

- above all, safeguarding human rights, pluralist democracy and the rule of law;
- strengthening democratic stability in Europe;
- enhancing knowledge of Europe's cultural identity and cultural diversity and fostering their development;
- reinforcing social cohesion and social justice.

These are the objectives pursued by the Committee of Ministers, the Council of Europe's highest decision-making body, through the programme of activities implemented in particular by the General Directorates, the Parliamentary Assembly, the European Court of Human Rights and the Congress of Local and Regional Authorities of Europe.

By granting consultative status to over 350 non-governmental organisations, the Council of Europe has also established a genuine partnership with the citizens of Europe.

DG III, the Directorate General for Social Cohesion to which I belong, seeks solutions to problems arising in the social, health and public health fields. In social policy matters our strategy is to focus on combating poverty and social exclusion in a number of areas: migration, education and training, employment, public health and integration of people with disabilities.

The Council of Europe also establishes Partial Agreements, an adaptable form of co-operation enabling a group of states to engage in activities of interest to them.

It is one of those Partial Agreements, the Partial Agreement in the Social and Public Health Field, with 18 member states and 8 observer states, which is active in the sectors of public health and rehabilitation and integration of people with disabilities. This major forum is being organised by the Division of that Partial Agreement.

However, would it not be more advantageous if all 45 member states of the Council of Europe could benefit from the excellent work done under this Partial Agreement and the results achieved?

We considered it a tangible step in that direction to invite all 45 member states to participate in this forum. I am particularly pleased that some countries have accepted our invitation and are represented at the forum today. This is a very encouraging sign.

More specifically, our work programme in the context of the Council of Europe in the public health field covers the following:

- nutrition and food safety
- materials coming into contact with food
- flavouring substances
- pharmaceutical products
- and cosmetic products.

The Committee of Experts on Nutrition, Food Safety and Consumer Health, which is made up of experts appointed by the national authorities, draws up resolutions, guidelines, scientific reports and other instruments.

Its programme covers sectors as varied as nutrition in hospitals, functional foods, food supplements, high-energy drinks, stored product protection and, of course, nutrition in schools.

One of the committee's key tasks is organising European forums, bringing together people from different backgrounds to debate, and exchange information on, topical issues.

The Committee of Experts set up a working group, chaired by Dr Mikkelsen, who is also chairing the forum, with the very task of organising this two-day event.

I wish to take this opportunity to thank Dr Mikkelsen and the members of the working group, as well as my colleagues, Laurent Lintermans, Sheila Boulajoun, Audrey Malaisé and Lindsay Chestnutt, for all their hard work in preparing the forum.

However, without your participation we could not have held this event.

I can but welcome the fact that so many of you accepted our invitation to come and discuss the subject of school meals and propose improvements to the current approach and I thank you wholeheartedly for being here.

It has become almost traditional to hold a forum on a specific nutrition-related subject every two or three years. The papers presented at this forum and the discussions and conclusions will subsequently be studied by a group of experts responsible for devising measures to be implemented by the member states in the field concerned.

Therefore, our theme this year is our children's eating habits and health. This is a matter of concern for us all and represents a huge challenge.

How could we fail to be moved by the significant increase in the number of children who do not eat a balanced diet, the most visible sign of which is the growing number of children all over Europe who are obese? How could we disregard this trend, which not only affects the well-being of children - and of the future adults active in tomorrow's society - but also raises significant concerns as to the long-term health implications and the cost to society? One response to this complex situation lies in education and learning, which is, I believe, often a source of solutions. The earlier children are made aware of healthy eating habits and are offered easy ways of adopting them, the lower the risk that they will develop health problems due to a bad diet. Schools and all the professionals contributing to schoolchildren's well-being - that is to say all of you here today - have an essential role to play. Your presence at this forum shows you have understood this.

I am sure that there will be some very lively debates, in which no significant issue will be overlooked, and that they will lead to many new ideas and realistic solutions for improving the situation. I hope that your conclusions will serve as a basis for recommendations on healthy eating in school and that they will be suitable for adoption by the Committee of Ministers.

Lastly, I hope that, when you return to your home countries, you will pass on the ideas raised at the forum to your colleagues and that the network of experts involved in the Council's work in this field will continue to monitor the situation in the member states, so as to ensure that real progress is made regarding the food served in schools.

I wish you every success in your work and cordially invite you to the reception being offered by the Secretary General at 6.30 this evening in the Council of Europe restaurant.

Thank you for your attention.

**YOUNG MINDS 2002 -2003 –
FORWARD EVER, BACKWARD NEVER**

**Ms Sarah HUNTER
Ms Tara McARDLE**

**Young Minds 2002 - 2003 –
Forward ever - Backward never**

By **Ms Sarah HUNTER**

and

Ms Tara McARDLE

Pupils of Plockton High School
Scotland

SARA HUNTER

I should like to begin by introducing myself.

My name is Sara Hunter, I'm fifteen years old, and I'm a pupil at Plockton High School in the West Highlands of Scotland. I'm attending this Conference today as a member of the Young Minds group of my school, along with my fellow pupil Tara McArdle, whom I will introduce to you shortly. Both of us have been members of the Young Minds project for one and half years, since March 2002.

I should like to give you a little of the background to our involvement in the project which ran from March and culminated in the conference at Egmond aan Zee, in Holland, at the end of September 2002.

Between 15 and 20 schools from all over Southern, Northern and Central Europe took part, and the range of countries went from Iceland to Macedonia. The project was divided into three broad sections. Firstly, Food and Nutrition in schools – what can pupils do to improve the quality of meals, snacks and drinks on sale at break-times? Secondly, Drugs and Alcohol – what can pupils do to stem the tide of these dangers to themselves and their fellow pupils? Thirdly Well-being in schools – what can we do to improve the environment of the school to make it a more positive and welcoming one for young people? Plockton High School was teamed up with schools in the Czech Republic, Denmark and Holland to look at ways of improving nutrition in schools, and to come up with practical and effective ways for so doing. It was not enough just to have the vision: it was all important to realise it, to make it happen.

It is crucial to the success of any project that the people affected by it should have ownership of it. In a school, that simply means that if the pupils take the initiative and share it with their fellow pupils and staff, then there is every chance of success.

The Young Minds project is designed to raise awareness in teenagers and pre-teenagers about the importance of healthy eating. It also aims to change and improve the food on offer, as well as attitudes towards food in school. So Young Minds for us is part of the continuing health alarms going off all over the Western world at the present

time. Today's young people are tomorrow's older generation, and if things continue the way statistics now show, many people will die at a relatively young age of illnesses that could have been prevented through better choices in nutrition. The Young Minds project is one step towards ensuring that the next generation lead a long and full life, free of disease. Young Minds has a confident message for schools : wholesome food is medicine for both body and mind.

Of course, there are many questions to be answered. What is wholesome food? Is it tasty or boring phenomenon? Do we exclude all that is not wholesome? Or is it true that a little of what you fancy does you good? Can we only go so far, and hope that we can persuade young people to include some healthy options in their diet? How do we, in fact, change attitudes? Can we hope to overturn an entire eating culture?

After all, Scotland is the home of the deep-fried Mars bar, and has the highest rate of heart disease in Western Europe. Well, we Young Minders set about our project in Plockton High School by trying to find out some answers . Our research was done through questionnaires, surveys and direct communication with pupils. We wanted to find out specifically the following things. One, was the choice of poor food due simply to pupils being uneducated on nutritional needs? And by poor food, we meant fatty and sugary options, without a reasonable balance of essential nutrients. Or was it drastically the case that the school was not just providing healthy options? Or was it a more complicated issue – did young people see healthy eating simply as “uncool”, and unnecessary interference from adults? Or was it that young people were mostly from family backgrounds that saw eating healthily as far too expensive an option? Or did people believe that if food was enjoyable ,then it was good for you, therefore burgers, chips and deep-fried chocolate were as healthy as anything else?

The results were surprising. Most pupils were quite clear about the need for a balanced diet, and knew about protein, complex carbohydrates, vitamins, and minerals. They also knew that an exclusive diet of chips and burgers was not good for them. And most said they would go for healthier options if they were made available.

So that was an encouraging beginning. So we then asked them what we should all do about this. And eventually, in terms of a good start, one suggestion seemed to have more appeal than any other. Our enquiries showed most interestingly that many pupils did not have breakfast in the morning before coming to school, and that many could not concentrate properly in their classes during lessons before lunch. They often responded to hunger by hastily eating a chocolate bar in the short break and that was all. After intense discussion within our group, we decided that this was an issue that we should tackle, and we decided that the school should provide wholesome breakfast choices at low or at least reasonable cost. Thus the Breakfast Club was born. My fellow pupil Tara will go into the effects of this in detail in a moment. But the point was that the vision had begun to happen.

Our studies also showed, as indicated, that many young people did wish for a healthier range of options at school, but felt the school, or the commercial company supplying the school, provided far too wide a selection of crisps and sweets. This encouraged a

lot of children, especially the younger ones, to fill up on chocolate at lunch times instead of having a proper meal.

We took a good look at this problem, and worked in various ways with our Danish, Czech and Dutch partners, on the Young Minds web-site and on-line sharing ideas about what made for healthy eating, how we changed attitudes, what guidance we as young people could give our own contemporaries, how we could punch home our message. We designed food pyramids which enabled us to share common solutions about communicating and reinforcing the gospel of healthy food as the best medicine. In fact, it was amazing that we shared so much in common. We also got Scottish Television interested, and they filmed our efforts to improve both at school in Scotland, and at the Young Minds conference in September of last year. The whole issue became very high profile both locally, and nationally. We were on a roll and you may well ask the questions; did we keep rolling?

I promised I would introduce you to my fellow-pupil, Tara.

She did not attend the Egmond aan Zee conference last year, but remained in Scotland as a member of the home team. During the conference we chatted on-line with the home team and asked them to come up with ideas concerning nutrition. Tara was an active contributor, and as this year both she and I are studying Home Economics, I'm very glad she now has her chance to attend a conference on food and nutrition.

TARA McARDLE

Hello, my name is Tara McArdle, I`m sixteen years old, and I`m delighted to continue this report.

Well, did we keep rolling? We decided two things after September 2002. One was to keep asking our friends and fellows at school what they wanted as improvements in their food choices; the other was to push hard and make desirable changes. The title of this presentation is " Forward Ever, Backward Never", and we worked hard in that spirit to alter the attitudes, and diets of our school in favour of a wholesome eating culture. We found Young Minds to be most effective when the ideas thought up and carried out were those of the pupils themselves because this meant the pupils were deciding how they wanted the problem solved, so that when change came they were happy to go along with it. This made for a lot of successful positive developments.

First of all we looked at the school tuck shop. This is a little shop where traditionally soft drinks and chocolate bars, crisps and sweets are on sale. It is a typically British institution.

At one point, the tuck shop was managed by the school, but now it is run by the outside company which controls the school canteen. With the help of the staff and the agreement of the company, we changed the culture overnight. We got rid of the traditional sugar-laden chocolate bars and introduced healthy fruit bars with reduced fat content. We got rid of fizzy drinks and introduced both still and sparkling water,

and healthy fruit drinks. Additionally, we introduced snacks such as plain biscuits and cheese, and fruit salad, both of which are now very popular. And we added to that vegetable, pasta and tuna snacks, along with fresh fruit.

And I`m glad to say that water is very popular as well. It seems to be the new discovery. Lots of boys and girls were consuming fizzy drinks – Coke and Pepsi - after sports in order to quench their thirst. Now they go for water or fruit juice. Some members of staff say they notice an improvement in the behaviour and concentration of such pupils when they come to their classes after sports. Certainly, it seems to me that in a centrally heated school, providing water seems to be common sense. It is so easy to become dehydrated.

But we didn't stop there. As the tuck-shop opens only during breaks, we decided it would be a good idea to install water fountains around the school, as pupils were saying they were often thirsty at change-over of classes. It was a popular move, and I`m glad to say that some of the more juvenile pupils have now stopped using them to spray water over their friends as they pass. I have to say that I think we were helped by images in the press showing sports stars and celebrities encouraging young people to drink more water.

Secondly, we looked at attitudes.

We found that lots of young people were glad of the changes they themselves had suggested and introduced, because the new approach had upgraded their lives and made them look better and feel better. But some people viewed healthy eating and proper healthy lunches as "uncool", and they wouldn't be seen dead being anything but "cool", so we hit upon the idea of providing a vending machine selling healthy snacks, sandwiches, water and fruit juice. Vending machines are definitely "cool", and even some of those who choose chips, or pizza will use them without losing their "street cred." We Young Minders think that tackling the whole business of attitudes is the real key to changing eating habits. To help change attitudes still further, we began a poster campaign to promote the whole concept of healthy eating, and encourage people to choose the healthy option. These posters encourage them to think about food and educate them to decide what the healthy option is. We need to work closely with our partner schools on the attitude question, because if we get answers to that, we've won half the battle.

Thirdly, we had a good think about the menus the school canteen was offering at lunch-time.

The school canteen offers plenty of pizza, chips, burgers, along with cooked vegetables, and there is no denying that pupils like this diet because they like the taste and the texture of the stuff. They are used to it, and it gives them plenty of energy. The problem with it is that it is unvaried in its content from day to day. It is very fatty, and heavy. We have succeeded in getting the canteen to introduce a healthy food bar, featuring tuna fish, cottage cheese, and egg with many green and red vegetables and fruit, dressed in low-fat yoghurt, which is beginning to prove popular, but we still have a lot of work to do on the main food-bar, especially as regards the fatty content. I believe this will come with time. Of course we all need some fat, some sugar, some

chocolate – after all, a little of what you fancy does you good. But not a lot! We have already succeeded in introducing a chip-free day. What is really encouraging is that the fizzy drinks and the traditional chocolate bars have gone, and there is now bottled water on sale, and plenty of fruit salad. We shall keep working on this, and I believe we shall be helped by the Regional Authority and the Scottish Government which is concerned about the bad eating habits of Scottish schoolchildren, levels of obesity, and poor school performance.

The real revolution will come when children are offered a tasty wholesome menu, and begin to feel good and look good. Wholesome food is medicine for both body and mind -that is what Young Minds is really about. Taking that fact together with the attitude question is our next point of departure. We intend to ask our fellow pupils by means of questionnaires not just what they would like to see on the menu at lunch-time but how they would like to change the environment itself to make it "cool". We would like to offer a list of possible meals that have a good nutritional content but do not include chips, burgers, and pizza. We don't wish to exclude these foods : we want to improve them nutritionally, but also expand the list of options. This is where we look forward to working at the conference with our partner schools to look together at menus, and to look at ways of altering perceptions.

Lastly, I return to the breakfast club where the revolution really began. This is still an important and integral part of our school day.

Our fellow pupils have told us they come to school not having had breakfast for different reasons. We all come to school from fair distances, and bus journeys last from twenty minutes to forty-five minutes. Some pupils cannot eat very early in the morning, and feel hungry only when they arrive at school. Others have no one to prepare breakfast for them. Others have no time to take breakfast. Yet others are hungry even after having breakfast. The Breakfast Club enables all of them to kick-start their brains for a day's learning, and provides them with the means to concentrate on their lessons. The menu includes reduced fat and sugar cereal, including porridge on Fridays, breakfast bars, bacon, fruit juice, milk and toast, and the prices are very reasonable. We shall not give that up, nor any of the other changes we have rolled out in realising our vision, because the benefits of the Breakfast Club should be the benefits of any other meal or snack taken during the school day.

But we are not complacent, and this is where the Young Minds projects are crucial: we must continue to move forward by exchanging views and ideas with other countries – that way we can learn what we have in common and also what is new and what we should be trying out at home. That is why Sara and I are so happy to be here, and looking forward to playing our full part in the events of the conference.

THANK YOU !

**HEALTH BEHAVIOUR AND NUTRITION
AMONG SCHOOL - AGE CHILDREN**

Prof. Dr. Lea MAES

Health behaviour and nutrition among school-age children¹

By **Prof. Dr. Lea MAES**

Professor of Health Promotion & Medical Sociology

Department of Public Health

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ABSTRACT

In the 2001/2 survey of the Health Behaviour in School-Aged Children Study (HBSC) the eating habits and related behaviours of 11-, 13- and 15-year olds were explored in 35 European and North American countries.

The World Health Organization recognises that young people who develop healthy eating habits early in life are more likely to maintain those habits as they mature and to reduce their future risk of chronic diseases such as cardiovascular disease, hypertension, stroke, cancer, non-insulin-dependent diabetes mellitus and osteoporosis

Overweight and obesity in young people has been shown to be significantly associated with long-term morbidity and mortality. Strong evidence confirms this link and also suggests that long-term health is compromised by overweight during adolescence, as it is associated with increased mortality especially from coronary heart disease.

Overweight and obesity can be prevented by health eating habits and an adequate level of physical activity.

Eating habits, body image, weight control and body weight of European young people

There is evidence in the HBSC-study to suggest that there are a significant number of young people who do not conform to current nutritional advice. *Fruit and vegetable consumption* is relatively low and decreases with age. For example the percentage reporting eating fruit on a daily basis ranges from 38% amongst 11-year olds, 33% amongst 13-year olds to 29% amongst 15-year olds. Across age groups girls consistently report eating fruit more than boys. A similar pattern exists for the consumption of vegetables. Substantial variation in the consumption of fruit and vegetables exists across countries. The largest differences occur amongst 15-year olds, highlighting a 3-fold and 5-fold gap between the highest and lowest countries reporting daily consumption of fruit and vegetables respectively.

¹ based on the report of the 2001/2 survey of the HBSC-study: Young People's Health in Context. The full report will be made available for the participants of the Forum. More information on the website of the study: www.hbsc.org.

The findings indicate that a high consumption of *soft drinks* is common among adolescents, about 30 % of the students consume soft drinks every day in many countries, more boys than girls of all age groups consume soft drinks on a daily basis.

A significant number of young people skip *breakfast*. The results for having breakfast every day show great variation between countries, for example ranging from 44% to 89% for 11-years. Boys have breakfast more often than girls. The gender difference becomes more pronounced by age.

Body dissatisfaction and dieting are common in both boys and girls although many more girls report that they think their body is too fat and that they are currently on a diet or believe they need to lose weight. Both behaviours increase steeply with age amongst girls but not with boys. Whilst substantial variation in body dissatisfaction exists between countries, the study shows that the age of fifteen, even in the country reporting the lowest prevalence of dieting, well over a third (38%) of girls report that they are on a diet or doing something to lose weight or believe that they need to lose weight.

Self reported *height and weight* measurements were used to calculate levels of *overweight and obesity* among the young people in this study. Whilst caution should be taken in use of these figures a number of important observations can be made. Boys are significantly more likely to be overweight than girls in all countries. Overall, about one in six 15-year-old boys are overweight , although this figure rises to over a third of boys in the highest ranking country.

Physical activity and sedentary behaviour

There are a substantial number of young people in all countries who do not meet the current recommended guideline for *physical activity* for young people, namely one hour of at least moderate physical activity every day. In almost all countries fewer than half of young people across all age groups report not meeting the guidelines. Activity levels fall steadily with increasing age and the rate of decline is steeper amongst girls. However these figures may mask specific patterns occurring within particular countries. There are wide variations in patterns of physical activity across countries. For example amongst 15-year olds, the proportion of young people meeting the physical activity guidelines fell from around 1 in 2 in the top ranking country to less than 1 in 5 in the lowest.

Overall, over a quarter of young people were high *TV watchers* (defined as four or more hours a day), 1 in 7 spent more than 3 hours a day on the *computer* and almost 1 in 5 spent more than 3 hours a day during the week doing *homework*. Patterns of sedentary behaviour also varied considerably across countries. For example amongst 11-year olds there was about a 7-fold difference between the reported levels of high TV watching, a 6-fold difference between reported levels of high computer usage and a 17-fold difference in long homework hours during the week. However, all countries demonstrate a consistent gender difference in high PC use and long homework hours. While watching TV and videos is universally popular among both boys and girls, high

PC use is more likely among boys and long homework hours are more likely among girls.

Conclusions

From the cross-national data we can conclude that programmes to improve the eating habits and physical activity of young people are strongly needed.

As well eating habits as physical activity are influenced by many interacting factors at the individual (e.g. biological, psychological), social (e.g. family and peers), physical environment (e.g. school, sporting facilities) and macro-system or societal level (e.g. mass media, social and cultural norms).

Young people should receive messages from a variety of sources including the school.

EATING AT SCHOOL – A EUROPEAN STUDY

Mrs Fannie DE BOER

Eating at school – a European study

By **Mrs Fannie DE BOER, MHE**

International Agricultural Centre/Wageningen University and Research Centre
Wageningen
The Netherlands

ABSTRACT

Eating at school - making healthy choices

Health and good nutritional status are essential for good performance in school and later in life. At the same time an individual's educational level influences health, ability and motivation to maintain a healthy lifestyle. Well-designed and managed nutrition education programmes can, at relatively low costs, alter the nutritional behaviour of school children. However, very often these programmes do not reflect the provision of food in schools, essential for creating healthy environments in schools. The European Network of Health Promoting Schools (ENHPS), a joint project of the European Commission, the WHO Regional Office for Europe and the Council of Europe is working towards the integration of health promotion into all aspects of schools.

The present survey was carried out on behalf of the Council of Europe and WHO-Europe as the starting point for the Forum on Healthy Eating at which experts of the member countries will discuss different aspects of this topic. It was held amongst the members of the ENHPS and focuses on exploring the current practices of food provision systems in schools, how this is linked to healthy nutrition within the curriculum and in how far the two are embedded in the whole school approach. The survey is based on an earlier survey in 1997 on 'Healthy Eating for Young People in Europe', published as part of a European Guide by WHO-Europe, 1998. This presentation will highlight the main findings of the survey.

Speech

Thank you for the opportunity to be at this Forum and to share with you the results of the survey on the current status and practices of Eating at School across Europe. The reason for this survey was a request made by the Council of Europe ad-hoc group on Nutrition Education in Schools. The ad-hoc group wanted to follow up a 1997 survey (1) on the state-of-the art of nutrition education in 15 European countries, in order to have a basis for discussion among stakeholders of the different European countries at the Forum you are attending today.

The **objectives** for the survey were threefold; firstly, to explore the provision of food in schools across Europe; secondly, to find out how food provision is linked with nutrition education in primary and secondary schools. The third objective dealt with

how the provision of food and nutrition education is embedded in the Whole School Approach.

Methodology

Topics of the former survey were taken as a basis for the questionnaire. Members of a small Taskforce established for preparation of the Forum were invited to contribute to the selection of the topics. For all topics questions were formulated after which the questionnaire was trimmed down to its current length, commented on by the Taskforce members and my supervisor of the University of Maastricht. The questionnaire was field tested in Denmark and in the Netherlands.

The final questionnaire was sent by the Secretariat of the Ad-hoc Group to all national co-ordinators of the European Network of Health Promoting Schools, asking them to send it on to experts in the nutrition education field, if necessary. All data were entered in an Excel spreadsheet, after which an exploratory analysis was made.

The results I will share with you have to be treated with respect to **the limitations** of this study. Around half of the countries responded, this is too low a response to generalise results. In certain countries health promoting activities in schools are decentralised to regional (in some countries there are autonomous bodies which determine the interventions themselves) or local level, the questionnaire however asked for data collected at national level. This meant that sometimes reasonable assumptions were made either by the countries or me, in order to make a comparison between countries possible. Not all data were easily accessible for all respondents so not all questions were answered. The person who received the questionnaire, the focal point of the Health Promoting Schools Network in the country, may not have been the right person to respond in some cases.

Countries

This slide provides an overview of the 44 countries to which the questionnaire was sent. Twenty-four of the countries reported back. The Belgian response was entered as two different countries because of the vast differences between the two communities, as were the responses of Scotland and Wales. The total response rate was 55%.

Respondents were: Albania, Belgium, Croatia, Cyprus, Czech Republic, Denmark, France, Finland, Germany, Ireland, Latvia, Lithuania, Luxembourg, Moldavia, the Netherlands, Poland, Portugal, Scotland, Slovakia, Slovenia, Spain, Switzerland, Turkey, Wales and case studies from England. Norway has also returned their questionnaire, but unfortunately I could not include their data for this presentation. Their results will be included in the final report.

The survey consisted of 48 questions around 6 main topics.

1. A **general one** related to the main nutrition related health problems among school children
2. **Policies, rules and regulations:** what are regulations for healthy eating in school and at what level are they made?

3. **Nutrition education/teaching about food:** who teaches food and nutrition and how is nutrition embedded within the curriculum?
4. **Provision of food:** what is provided? Who is involved in planning and implementing food provision systems in schools, and how is this done?
5. **Whole school approach:** are there any school health or nutrition policies and who is involved in the school health or food system?
6. **Evaluation:** what is evaluated and by whom?

Since my time is limited we picked some highlights from each topic to present as results.

General: main nutrition related health problems

Overweight and its more severe form, obesity, were mentioned in our research by 12 of the 16 countries. The risks related to overweight and the need to design approaches to address this issue was pointed out by Mrs Maes. Many countries are starting with programmes addressing overweight by promoting physical activity and healthy eating. In addition, underweight and its more severe form, malnutrition, was reported by more than half of the countries. The provision of food in schools is of crucial importance for these children. Underweight is not always due to lack of food but can also be caused by severe dieting as is shown in the results of the HBSC study. Malnutrition due to a lack of food was reported more by low-income countries and countries in transition.

Research (2) has shown that children who lack certain nutrients in their diet such as iron and iodine or who suffer from malnutrition, hunger and parasitic infections do not have the same potential for learning as healthy and well-nourished children. Programmes serving a meal during the day or a healthy breakfast could be very beneficial for the cognitive development of these schoolchildren and improve the effectiveness of the educational system. If we want to increase the child's learning at school, more attention should be placed on his/her nutritional well-being.

Policies, rules and regulations

Policies at school level, based on the guidelines for healthy eating are needed to support the provision of food in schools. Policies concerning the hygiene of the food provided are essential to assure safe food.

To the question as to whether there are any nutrition-based regulations for foods served/sold at schools 17 out of 24 countries responded in the affirmative. In general those regulations were taken from the national healthy eating guidelines.

To the question about regulations concerning hygiene, 20 responded positively, HACCP and Codex Alimentarius were frequently mentioned as examples of these guidelines.

These results indicate that there is more emphasis on food safety in countries than on healthy eating, certainly at the European level. It could also be that regulations on healthy eating are more difficult to develop at the European level or more complex to implement. The question remains that in the 17 countries that mention national guidelines on healthy eating, how well these are implemented in schools. Making

policies is the first step, but implementing and adhering to the policies is quite another and some form of inspection/monitoring would seem to be desirable.

Provision of fruits and vegetables in schools

There is ample evidence on the beneficial effects of an intake of at least 5 servings a day of fruits and vegetables. In the HBSC survey as well as in this investigation, countries reported a low intake of fruits and vegetables to be a problem among school children.

Thirteen countries are now rising to the challenge and have started special fruit and vegetable programmes for schools, which is an encouraging initiative. Especially since this type of programme was not mentioned in the 1997 survey (1).

The majority of these interventions are aimed at primary schools; some of the countries report pilot programmes, offering fruits and vegetables during school breaks as is the case in Belgium, Moldavia, the Netherlands, Scotland and Wales. These are often pilot programmes for groups of schools in one part of the country, such as in the Netherlands, or already established programmes for all schools like the ones in Scotland and Norway. Some countries serve ample portions of fruits and vegetables as part of the warm meals as in Lithuania.

In the presentation of Norway you will hear more about their intervention concerning implementation of fruit breaks (4).

Teaching about healthy eating

Disciplines in which nutrition is taught

There is evidence that well-designed and managed nutrition education programmes can, at relatively low cost, alter the nutritional behaviour of school children (3).

Regarding the question as to whether nutrition was taught in schools, almost everybody responded positively. However, half of them said it was not done systematically. Nutrition seems to be taught in many topics, this graph shows the main ones. As we can see, the more important ones are science, physical education, health education, and biology. In secondary schools home economics and chemistry are also mentioned.

This outcome is quite similar to the 1997 survey in which subjects such as biology and health education ranked high as a vehicle for nutrition education.

How healthy eating is addressed in these subjects and to what extent other aspects such as cultural, social, behavioural or lifestyle are addressed, we cannot conclude from the results of this survey.

That nutrition education can have an impact is shown for example in the poster of Portugal, which reports healthier eating practices among school children after intensive training (4).

Another poster from Portugal demonstrates that nutrition education does not have to be necessarily taught in class sessions. Interactive ways of teaching nutrition are becoming more and more popular (4).

Are teachers 'literate' in terms of nutrition and healthy eating?

In primary schools the class teacher is the main source for nutrition education in schools. For secondary schools the subject teacher is mentioned. But in how far are these teachers trained in nutrition?

For primary school teachers we see that in less than half of the countries teachers are trained in nutrition during their initial teacher training. More countries responded that they had in-service training in nutrition for teachers in the field.

For secondary schools the response for nutrition during initial teacher training is the same. We might expect that for some subjects like home economics and biology, teachers get nutrition as an integrated part of their training.

Ideally, there should be more attention for nutrition during initial teacher training courses, especially for primary school teachers. It seems to remain difficult for countries to incorporate this in their teacher training curricula. It is encouraging that more countries report nutrition to be part of in-service training.

Provision of food in schools

Do schools provide food and in which way?

In almost all countries the provision of food in schools is organised in one way or another. Albania reported that it did not have any food provision systems in schools. Ways of providing food range from full school meals to providing basic facilities where children can eat their home-brought packed lunch. This graph shows the variety of these systems.

For primary schools we see that food is mainly provided in the form of traditional school meal systems or lunchboxes. In addition, we see that special programmes for school milk and fruits and vegetables are common.

For secondary schools we see a wider variety in food provision systems. In addition to the traditional school meals and lunchboxes, students can also get food from cafeterias, vending machines and to a lesser degree from tuckshops.

Special programmes for school milk or fruit and vegetables are not available for these students yet, at least not at any scale.

The infra structure of systems like cafeterias and tuckshops in schools can be used to advantage in introducing programmes selling healthy food such as the fruit tuck shops in Wales.

In the first session, Ines Heindl will report on the different food systems, which are found in schools in Germany and the guidelines the Germans have developed for these systems (4).

Vending machines for soft drinks/snacks and sweets.

The existence of vending machines differs very much between primary and secondary schools. In primary schools, many countries responded that vending machines for soft drinks were not allowed. And if they were allowed the majority of these countries responded that they existed only in a small percentage of the schools. For secondary schools we see a much higher presence of soft drinks vending machines. Vending

machines for snacks and sweets showed a similar pattern to the one presented for soft drinks.

The introduction of vending machines in schools opens up different issues for debate. Firstly, there is the nutritional point of view. If the vending machine is loaded with high sugar/high fat snacks and sweets and high sugar soft drinks, it will tempt the student in the wrong nutritional direction. In addition, there is the issue of commercial advertisement in schools, an issue over which many nutritionists and health educators express reservations. On the other hand, sales from vending machines may generate additional income for the school. These issues could be turned in a more positive direction. Vending machines as well as cafeterias and tuck shops could also offer more healthy food products. In the UK for example, where vending machines are stocked with water and other healthy drinks instead of the fizzy ones. In Switzerland they have the Pausen kiosk where students can choose out of healthy foods, often organically grown.

With these approaches we might be able to reverse the high intake of simple carbohydrates and offer students the opportunity to select healthier foods during the breaks. Taken into account that 13 of 19 respondents mentioned high intakes of soft drinks and sugar to be one of the main problems for schoolchildren, this type of programme is definitely needed.

Food planning and food preparation

Student and parent participation in planning meals together with kitchen staff or an external caterer is recommended in a Whole School approach, since it creates a wider base for acceptance of the food served or ownership of the choices made. In some countries "nutrition action teams" or "SNAGS (school nutrition action groups) form committed partners in schools to facilitate this approach.

Regarding the question as to how meal planning was organised, the majority of countries reported the involvement of either external caterers or school kitchen staff. Five countries mentioned that students had an active part in the preparation of food, namely Denmark, Ireland, the Netherlands, Slovakia and Switzerland, for the Netherlands this is done in some special food preparation classes.

Denmark reports a good example of the involvement of school children in making choices concerning food, healthy eating and environment, as is explained on their poster (4).

School food subsidies

Subsidies can be given at national, regional, local or school level. Many countries mentioned that low funding was a major barrier for implementing healthy nutrition in schools. Subsidies for food provision could be an incentive to start such programmes.

In our research 10 countries mentioned that daily meals are subsidized for all children such as in Finland, Spain and Poland. For example in Finland municipalities are responsible for education and receive funds from the national budget to do this. In addition, municipalities collect local taxes, which will also be used for education,

including the provision of meals in schools. Some countries only subsidise meals for socio-economically disadvantaged groups like in Lithuania.

Special programmes such as school milk or fruit and vegetable programmes are subsidized in 12 countries. For example, in the Netherlands the free fruit and vegetable provision for primary schools is subsidised by the European Union, the Ministry of Health and the Fruit and Vegetables producers. There is a poster on how this fruit and vegetable scheme is working.

These responses might not reflect hidden subsidies, such as the time and costs of food preparation, kitchen maintenance and other overhead costs, which do not always form a part of the meal costs.

Whole school approach

Written health and nutrition policy

A health promoting school approach creates a supportive environment for healthier living in which education is linked with healthy eating. This approach is often reflected in a written school health policy.

16 countries mentioned that they have written health policies in primary schools. Of these, 15 mention that nutrition is included in the health policy. 11 countries mentioned that they have these policies in less than 25 % of primary schools, for example Ireland, Germany, the Czech Republic, and French speaking Belgium. Five countries are in the 75 - 100% range like Albania, Cyprus, Croatia, Slovakia and Spain.

For secondary schools, 16 countries reported written school health policies, the majority of these fall within the less than 25 % of schools category, some in the 75-100% category. Of these, 15 countries reported that nutrition is part of written policies: Germany, Ireland, Lithuania and Luxembourg.

The question remains, however, how well are these policies implemented?

In the first session, Gillian Kynoch will report on a new initiative in Scotland where a whole school meal approach is integrated into a health promoting school approach.

Public/private partnerships

A contract between commercial or private food providers and public schools may have been viewed in the past as a kind of partnership or as a commissioner/supplier relationship. Nowadays, a partnership implies more: different stakeholders are working together to provide healthy food in school, also at the level of regional or local authority. Compared with the 1997 survey, partnerships have been developing into a more continuing relationship. In 1997 only one-way activities such as supplying educational materials or occasionally supporting special events were described. A good example of such a modern partnership model will be presented by Mrs Aarum on the experiences of Norway with the implementation of school fruit programmes.

In our survey, 10 countries reported that there were public/private partnerships in schools e.g.: Belgium, Denmark, Germany, Switzerland, and Portugal. Examples of these forms of co-operation are: external caterers in Denmark, farmers' wives selling sandwiches, fruits and vegetables in schools in Switzerland, local producers supplying fruits in school in Belgium and Scotland and national fruit and vegetable producers for

primary schools in the Netherlands; milk drinks provided by companies in Slovakia. These partnerships can even go as far that with private money schools are built according to the specifications of the local council, as was reported by Scotland.

Evaluation

Monitoring and evaluation are important tools to show what is successful and what not in healthy nutrition in schools. Monitoring and evaluation can be done at different levels and there are different types of evaluation as shown in this slide.

In the survey we asked what type of evaluations are made in the different countries concerning eating at school and at which level.

Most countries report interventions to be evaluated at national or at school level, less so at regional or local level. Only 1 country, Luxembourg, reported that they use baseline, process, outcome, impact evaluation and monitoring at the national level. 5 countries report baseline studies at national level; 3 at regional level, 1 at both, 3 countries at regional level (Denmark, Portugal, French speaking Belgium); 3 at local level. Six countries report that they have baseline evaluation in school interventions.

Nine countries do not report having any structurally evaluated interventions. It will be important for us to reflect on the barriers for evaluation and monitoring of healthy food provision and to share good practice between countries at this event.

Barriers

Only three countries, Cyprus, Luxembourg and Turkey, stated they did not have any barriers for the implementation of food provision programmes, including monitoring and evaluation. Other countries mentioned the following as the main barriers:

At the individual/school level, countries stated:

- Low priority for healthy nutrition
- Unsupportive school environments towards healthy nutrition
- School staff who were unmotivated or too overburdened to give attention to healthy nutrition
- Inadequate monitoring and evaluation, partly due to low priority, partly to lack of knowledge on how to set up efficient monitoring and evaluation systems

At community/national level, countries mentioned:

- Lack of political will; the need to convince politicians and other leaders to facilitate healthy nutrition in schools
- Poverty was mentioned quite frequently; families with low financial resources cannot afford to pay for food provided in the schools
- Lack of funding for the schools themselves to implement programmes promoting healthy choices of food in schools
- Monitoring and evaluation is not seen as essential.

Challenges

- To motivate school children, parents, teachers and other school staff, community members and politicians to focus on healthy eating in schools
- To address overweight and obesity issues in school children by designing interventions on the provision of a healthy school environment and good nutrition education that promotes healthy food choices and physical activity
- To match the taught curriculum on healthy nutrition with the whole school approach. This is what we might previously have called the hidden curriculum, but it is perhaps now time to expose or reveal the hidden curriculum and to demonstrate its importance
- To establish partnerships to promote healthy food choices in schools
- To design simple, practical and participatory monitoring and evaluation systems for food provision in schools.

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Poster Abstracts and Speeches

IS THERE A HEALTHY SCHOOL MEAL?

Prof. Dr. Ines HEINDL

Is there a healthy school meal?

By **Prof. Dr. Ines HEINDL**
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Nutrition education and its importance

Nutrition – what people eat – is known to be one of the key factors influencing health. If people eat healthily, they can avoid many preventable diseases and can live longer lives with fewer illnesses. Many European countries have attempted to introduce campaigns for healthier eating, and there is widespread concern about the trend towards a fast-food culture in which traditional styles of eating and cooking are declining (Dixey et al. 1999).

Whereas health professionals can clearly see the relationship between diet and health, most people's diet and food preferences are determined more by social, economic, climatic and geographical factors and by religion and customs than by concern for health. In Europe's rich cultural diversity food and eating are powerful expressions of cultural and social identity, and this is a factor that must be taken into account in any attempt to encourage people to eat healthily. Even in Europe many people do not have enough money to provide themselves and their families with a healthy diet. Nutrition education, therefore, needs to consider all these issues, including the cultural and financial ones (Dixey et al. 1999).

In order to be effective, nutrition education must

- be personally relevant
- be clearly understandable
- use food and meals rather than nutrients as a conceptual basis
- be consistent in its dietary messages
- take into account people's perception of relative risks
- emphasize the benefits of change
- address the barriers of making dietary changes.

Nutrition and health for young people

Main health problems for adults in the European Union are obesity, cardiovascular diseases and cancer. The Kiel Obesity Prevention Study (KOPS), one of the most important research projects in Germany, which started in 1996 and will end 2009, is looking at obesity in childhood. First results clearly reveal the following facts (Müller et al. 2001; Müller 2002; Danielzik 2003):

- Compared to results of 1978, 23% of the 5 to 7-year-old children and 40% of the 9 to 11-year-old children are overweight

- Those children are more often found in families with obese parents, low income and a low social status (school-leaving certificates of their parents). Obese children try to avoid physical activities more often than other children
- Children with low interest in physical activities from families with a low social status spend more time in front of television, videos, computers and tend to prefer fast food, snacks, cheap, fat sausages, sweets, fizzy drinks etc. Beyond this there is no general connection between the quality of nutrition and obesity.

The organisers of Kiel Prevention Study are not satisfied with simply presenting these new research data. Professor Müller and his team also offer support programmes to schools and families and evaluate acceptance and efficacy. After 5 years of intervention there are obvious signs of success in the schools concerned, but families with obese children seem to take only marginal interest in this project. Just 20% of all the parents the Kiel project tried to get involved are participating and willing to cooperate.

According to Professor Müller and the WHO, obesity starting in childhood is – at present – the most urgent health problem (“obesity epidemic”). Prevention programmes seem to highlight the fact that interventions may have an influence on the incidence of obesity, but not on its persistence. It has, moreover, become evident that the crisis of our health system is an unrecognised crisis of our education system.

Germany after PISA

The health and nutrition problems in Germany can be connected to the changing situation in schools after PISA. The Germans fairly quickly responded to the bad results compared to other European countries, mainly Finland, as part of the PISA-Study. Not only schools but also parents were made responsible for the lack of education, missing support of children to develop strategies for life-long learning. The German school system is, by and large, one of half-time schools, which is now supposed to be turned into one of all-day schools. The German federal government offers an investment programme with a target of 10,000 all-day schools. At first glance the new concepts seem to be considering everything for better learning conditions. The facilities for healthy meals in all-day schools, however, are often considered to be purely organisational problems, a view taken by school authorities and sometimes by heads, too. Financial considerations are prevalent, and it is often the cheapest offers from caterers that are accepted.

Even at the time of the predominantly half-day school system in Germany it did not seem legitimate to adopt the view that the school was responsible only for feeding childrens’ minds, or put differently: German schools only provided food for thought. Young people and teachers who stay and work at school all day long can expect ideas and concepts that include both mind and body as well as social and cultural issues. School-related projects on Health Promotion (European Network of Health Promoting Schools) all around Europe are already in existence: so nobody has to start from scratch.

The school-based nutrition education guide "Healthy eating for young people in Europe" (Dixey et al. 1999) consists of a planned and sequential core curriculum. What is offered to children, either within the classroom or as part of the whole school experience, needs to be planned and coordinated appropriate to their developmental stages. This is a sound educational principle, but health education and nutrition education are often not co-ordinated across school. The idea of a spiral curriculum, as part of the guide, involves repeating and extending the work on a topic in a dialectical fashion as children develop.

A health- promoting school concerned with nutrition education would be expected to (Stockley 1993):

- have nutrition teaching that is provided by adequate resources
- develop a statement of policy about nutrition education
- focus on enjoyment of food
- promote training for staff – teachers, caterers and cleaners – in healthy eating
- provide comfortable surroundings in which children and staff can enjoy eating
- enable healthy choices if food is provided at the school
- involve parents and the wider community
- be explicitly concerned that no child is hungry while at school and that poor nutrition does not affect learning
- co-ordinate all aspects of nutrition education to ensure efficient use of resources and to minimize contradictory messages
- ensure that all staff are committed to the goals of the health-promoting school and be explicitly concerned about the health and well-being of both pupils and staff.

The Netherlands, Portugal and Spain have implemented this guide through materials and policies. Since legislation and administration in the field of education predominantly fall within the purview of the individual German states, the process of implementation takes longer, but a promising start has been made (Heindl 2003).

"Meals at school should be balanced in nutrients"

Demands for wholesome meals at school led to recommendations for rules and regulations in Germany, but not every local government has transformed them yet into policies. Lower Saxony and Saxony-Anhalt have implemented specific regulations, North Rhine-Westphalia formulated recommendations on breaks and meals at schools, as a right for pupils and staff.

The German Society of Nutrition (DGE) set up a working group of experts on nutrition in schools, with specific instructions to focus on eating times, food and nutrition quality at school. Two recent publications on nutrition in all-day schools demonstrate the urgency (Heseker et al. 2003a,b) of supporting recommendations.

The expert group distinguishes between different catering systems, as there are:

- Freshly prepared meals by a kitchen staff at school, responsibility of different authorities (also parent organisations)
- Distribution system (preparation of meals in an external kitchen)
- Processing or regeneration system (i.e. cook and chill-food)
- A mixture of different systems (i.e. externally pre-prepared main courses completed by salads and deserts at school)
- Extended food choices at kiosks
- Fast food systems (i.e. fast food restaurants supply meals)
- Cold meals systems.

Furthermore the expert group comments on these different systems to make it possible for schools to make informed decisions. As might have been expected, freshly prepared food at school has all the advantages of a wholesome meal, because of its sensual, nutritional and social values: Attractive meals within attractive surroundings, flexible response to the wishes of the customers, no restriction on the choice of food for those who prepare the meals, daily communication between kitchen staff, teachers and pupils. But it is also known that quality is not the only factor one has to take into account, and often there seem to be economic reasons against freshly prepared food in schools. Carefully prepared fresh food also needs a qualified kitchen staff. When comparing the different possible catering systems, acceptable compromises between hot and cold meals should be made on the basis of demands for the physical, mental, intellectual and social efficiency of pupils, teachers and other members of staff.

The criteria for these demands are:

- Sensual quality: smell, taste, consistency, colour etc. of meals
- Nutritional quality: ratio of nutrients for a wholesome and healthy nutrition
- Learning processes: positively affected by wholesome food
- Messages: compatibility with both classroom and general school issues
- Decision-making: promoting healthy choices when considering different offers
- Eating atmosphere: enjoyable meals, pleasant eating places
- Participation: influence on the catering system by the customers.

Aesthetic and cultural issues of a healthy school meal

Young children can learn to enjoy almost every food, hot and spicy food, bland healthy food, fast food, depending on what people around them eat (Schlosser 2002). The different cultures of the world support the view that meals that are supposed to set the

standards have to be sensually attractive to children and should be enjoyed in a positive atmosphere. The human sense of smell is still not fully understood and can greatly be affected by psychological factors and expectations. The colour of food can determine the perception of its taste. The mind filters out the overwhelming majority of aromas that surround us, focusing intently on some, ignoring others. People can get accustomed to bad smells or good smells. A smell can suddenly evoke a long forgotten moment. The flavours of childhood food seem to leave an indelible mark, and adults often return to them, sometimes without knowing why. These "comfort foods" become a source of pleasure and reassurance (Hirschfelder 2001), a fact fast food chains work hard to promote.

Childhood memories of "Happy Meals" can translate into a chance for parents and school catering. Why not try to learn from fast food restaurants? Their success is mainly built on product binding through flavour, typical combination of foods in an unconventional atmosphere and added values (toys, games etc.). Kindergarten children and primary school kids in particular want to know what their meals consist of, and they take a keen interest in foods, smells, tastes and consistencies. Sensual education through food and meals at school would create those happy memories in a socially positive atmosphere.

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**HUNGRY FOR SUCCESS:
A WHOLE APPROACH TO SCHOOL MEALS IN SCOTLAND**

Mrs Gillian KYNOCH

Hungry for success: A whole approach to school meals in Scotland

By **Mrs Gillian KYNOCH**
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ABSTRACT

The Scottish Executive has invested in a revitalised school meals service in Scotland. Nutritional standards have been developed for school meals and these will be enforced and monitored by performance management systems for schools. These are set out in *Hungry for Success: A Whole School Approach to School Meals in Scotland* (2003). Crucially, this initiative will be integrated into a health promoting school approach and will create a supportive environment for healthier living (of which healthy eating is a part) in schools. Children will be provided with healthier food choices, supportive environments and information and support for healthy food choices.

Measures include:

- Free fruit for all pupils in primary one and two
- New nutrient standards for school meals
- Standard portion sizes and product specifications
- Provision of drinking water
- Actions to incentivise uptake of free school meal entitlement
- Improved facilities in dining rooms

The recommendations are based upon 7 underlying principles:

- Creating a positive whole school / whole child ethos
- Partnership working
- Pupil consultation
- Eliminating stigma
- Managing the process
- Influencing choice
- Incentives to improve general uptake

The approach includes a detailed strategy for monitoring progress and performance and support for schools and education authorities to achieve the standards

The full report can be found at
www.scotland.gov.uk/library5/education/hfs-00.asp

Background

In January 2002, Scottish Ministers established an Expert Panel on School Meals to make recommendations that would form the framework of a national strategy for school meals. The Panel's remit was to provide cost recommendations and a fully developed implementation strategy to:

- establish standards for school meals
- improve the presentation of school meals to improve general take-up
- eliminate any stigma attached to taking free school meals.

In February 2003, *Hungry for Success*, the report of the Expert Panel on School Meals, was published. This report sets out the Panel's vision for a revitalised school meals service in Scotland and presents a number of far-reaching recommendations. Ministers have accepted all the Panel's recommendations including the national nutrient-based standards for school lunches.

These standards are the first of their kind in the UK. They form a key part of the Scottish Executive's major drive to improve Scotland's health record by improving the nation's diet. The Executive's Healthy Living Campaign and the Scottish Diet Action Plan seek to increase the amount of fresh fruit and vegetables in our diet and reduce the high consumption of fat, sugar and salt. These new standards offer us the opportunity of achieving major and lasting improvements to the health of Scotland's children by ensuring that our children have access to high-quality school meals.

Local authorities, schools and caterers are being asked to work in partnership with parents and pupils to implement the standards in all primary and special schools by December 2004 and in all secondary schools by December 2006. Later this year the standards will be supplemented by product specifications and nutritional analysis software to aid implementation and monitoring of the standards.

Speech

Nutrient based standards for school meals

Diet in childhood plays an essential role in growth and development, current well-being, educational performance and avoidance of chronic disease throughout life. Current knowledge on optimal diet for children is set out in the *Dietary Reference Values Report* (1991) for the UK and it is this report that forms the scientific basis for the design of the Scottish Nutrient Standards.

The proportion of the daily nutrient provision that should be achieved from a single daily lunch has been extensively reviewed by the Caroline Walker Trust Expert Working Group on School Meals (1992), the outcome of which were the *Nutritional Guidelines for School Meals*. These Guidelines cover the nutrients and micronutrients (vitamins and minerals) currently of most concern in school children's diets and remain largely appropriate for calculating the nutrient standards for Scottish school children. These

Guidelines were therefore adopted as the basis of the recommended nutrient standards. In addition,

- Fruits and vegetables are considered as part of the nutrient standards, with around 30% to be supplied by school lunch (World Health Organisation Recommendations on Diet, Nutrition and the Prevention of Chronic Disease 1990)
- Sodium levels have been revised since the original report and are now based upon the current recommendations of The Scientific Advisory Committee on Nutrition. SACN (UK). 2003.

It is recognised that the consumption of a diet based on bread, cereals and other starchy foods, fruits and vegetables, and low amounts of fat, sugar and salty foods is a fundamental consideration in catering provision. The provision of food and drink, which meets these nutritional standards, is a key part of achieving a healthy dietary intake, but it is recognised that food provides considerably more than biological requirements. To perceive school food only in terms of nutrient delivery would be a missed opportunity for the development of social and life skills and for culinary richness.

Nutrient standards can be achieved in a variety of ways which will involve consideration of menu planning (the composition of recipes used, the cooking and serving process), the product specification of individual food items, portion sizes and the frequency with which nutrient-dense foods are served during the school week.

Menu planning

To meet individual tastes the nutrient standards should be met by a choice of foods. Key points and menu-planning guidance is provided. Descriptors of foods and frequencies served are given as basic guidance for catering practice. It is emphasised that what is essential is the achievement of the nutrient standards. A flexible approach building on catering wisdom and experience, skills and local tastes is important in allowing a wide range of food and menu options to be available. It is important that good practice in menu design and food provision which demonstrates the achievement of these standards is shared amongst catering operatives. The Scottish Executive is commissioning the development of nutritional analysis software that will assist in the self-evaluation of nutrient standards.

Portion sizes

Portion size guidelines are necessary to assist caterers in planning lunches that meet nutrient standards for energy and other nutrients as well to satisfy young appetites. Hungry children are more likely to snack on high fat and sugar confectionery. Guidance on portion sizes is provided. In many cases schools will find that the portion sizes are substantially different from current practice. Larger portions of starchy food (bread, potatoes, pasta) and larger portions of fruits and vegetables will be required to meet the Scottish Nutrient Standards.

Product specifications

Product specifications are being developed to help plan menus to meet the Nutrient Standards and to raise the quality of manufactured products used in school lunches. Initial focus is being placed on fat and sodium content. They are being developed by the Food Standards Agency in Scotland. Consultation, particularly with the food industry, on the practicality, palatability and affordability of achieving such specifications will be an integral part of developing the specifications.

Drinking water

It is recognised that children need access to adequate amounts of fluids within the school day. Drinking water, which is free, fresh and chilled, should be provided with drinking cups or glasses within the dining room.

Food and drink choices

Promotion of appropriate food and drink choices is the responsibility of the whole school community. Within the dining room context there are specific issues that should be considered, including the following:

- **awareness** of appropriate choices (e.g. poster or other point of sale promotional materials, signposting and other visual cues)
- **access** to appropriate choices (e.g. counter positioning, easy access to promoted choices, less easy access to less favourable choices)
- **availability** of appropriate choices (e.g. ensuring sufficient provision of promoted items, especially such items as non-fried potatoes and salad)
- **acceptability** (e.g. promoted foods should taste good, be well cooked and attractively presented)
- **affordability** (e.g. appropriate pricing policy should be considered).

Special diets and allergies

Medically prescribed special dietary requirements should always be accommodated. Catering staff should be appropriately advised of the specific nature of the dietary requirement and children requiring special diets should be made known to the caterer. Diet guidance sheets should be provided by a State Registered Dietician in the form of detailed diet sheets or meal plans for the child concerned. This will indicate to the caterer the food choices that are suitable or should be excluded. The principle of variety and choice should apply equally where applicable to children on special diets as part of a wider child-centred approach to providing for these children.

Children and young people with special needs

Children and young people with special needs may have particular problems associated with eating. It is important that anyone involved in caring for children and young people with eating difficulties is trained to ensure that they can give the best and most appropriate assistance. These problems should not be a barrier to enjoyment and participation in meals and food choice or to learning about healthy eating.

Scottish nutrient standards for school lunches

These standards (Tables 1 and 2) are set for both the provision of food i.e. what the menu offers, and for the consumption of food i.e. what the child actually eats. The first of these, what the menu may offer, can be achieved by the caterer, but to influence the second will take a whole-school approach. Monitoring procedures will be set in place to monitor both the provision of food and the consumption of food by the child. The Scottish Nutrient Standards for School Lunches set out to ensure the provision of a meal that provides largely a third of a child's daily nutritional needs.

In Tables 1 and 2 the energy and nutrient requirements for children aged 5-18 years are presented as average values for males and females in three age groups. These guidelines provide figures for the recommended nutrient content of an average school lunch provided for children over one school week. In practical terms this is the amount of food provided, divided by the number of children eating it, averaged over a week. All the nutrient intakes in the tables are based on the average of the recommended intakes for boys and girls. The child's daily nutritional needs are expressed in terms of:

- dietary reference value (DRV) (or daily requirement)
- the reference nutrient intake (RNI) (the estimated amount of a nutrient that will meet the needs of most of the population)
- estimated average requirement (EAR) (in the tables EAR is used for energy to show the average requirement for energy for boys and girls).

It should be noted that current recommendations of energy intakes are based on children achieving a balance between energy intake and energy output allowing for growth and development. It is clear that children who are physically inactive will require less energy to meet physiological requirements and that excess energy will be a major contributor to the development of excess body weight. Both diet and physical activity are part of a holistic approach to maximising children's health.

To protect and to promote the health of children three nutrients are considered particularly significant. Calcium is important for bone growth. Iron is important for preventing anaemia, especially in secondary age schoolgirls. Folates are particularly important, again for secondary aged schoolgirls. It is recognised that some nutrients are supplied in high amounts in only a limited range of foods.

The higher level of 40% of RNI for iron and folate has been adopted. In practice, levels have previously proved hard to achieve. However, because of the high health impact of a deficiency, efforts should be re-doubled to ensure adequate intakes.

It is recognised that these standards will take time to implement. Consultation undertaken by the Panel suggested that this will be more straightforward to implement in primary schools than in secondary and that schools will need time to incorporate changes into financial and development planning. It is expected that all schools will make rapid progress, but a final implementation date of December 2004 and December 2006 for primary and secondary respectively is expected.

Main recommendations

Education authorities and schools should have the Scottish Nutrient Standards for School Lunches in place in all special schools and primary schools by December 2004 and in all secondary schools by December 2006.

School meal facilities should not advertise nor promote food or drink with a high fat or high sugar content.

Table 1: Nutrient Standards for School Lunches for Pupils in Primary Schools

| | | | Unit | Infants 5-6 years | Junior 7-10 years |
|---|---|-----|-------------|----------------------------------|----------------------------------|
| Energy | 30% of EAR ¹ Mean of girl and boy | | MJ/Kcal | 2.04 MJ 489 Kcal | 2.33 MJ 557 Kcal |
| Fat | Not more than 35% of food energy | Max | g | 19 | 21.7 |
| Saturated Fatty Acids | Not more than 11% of food energy | Max | g | 6 | 6.8 |
| Carbohydrates | Not less than 50% of food energy | Min | g | 65.2 | 74.3 |
| NME (non-milk extrinsic) Sugars ² | Not more than 11% of food energy | Max | g | 14.3 | 16.3 |
| Fibre/NSP (non-starch polysaccharides) ³ | Not less than 30% of calculated reference value | Min | g | 3.9 | 4.5 |
| Protein | Not less than 30% of RNI ⁴ | Min | g | 5.9 | 8.5 |
| Iron | Not less than 40% of RNI | Min | mg | 2.4 | 3.5 |
| Calcium | Not less than 35% of RNI | Min | mg | 158 | 193 |
| Vitamin A (retinol equivalents) | Not less than 30% of RNI | Min | µg | 150 | 150 |
| Folate | Not less than 40% of RNI | Min | µg | 40 | 60 |
| Vitamin C | Not less than 35% of RNI | Min | mg | 11 | 11 |
| Sodium | Not more than 33% of SACN recommendation | Max | mg | 393 | 655 |
| Fruit and vegetables | 1/3 of 5 portions per day | | Portions | 2 | 2 |

¹ Estimated average requirement

² These are added sugars rather than the sugar that is integrally present in the food (e.g. table sugar, honey, sugar in fruit juice and soft drinks)

³ Here calculated as 8g per 1,000 kcal

⁴ Reference nutrient intake

Table 2: Nutrient Standards School Lunches for Pupils in Secondary Schools

| | | | Unit | All secondary 11-18 years |
|---|---|-----|-------------|----------------------------------|
| Energy | 30% of EAR ¹ Mean of boy and girl | | MJ/Kcal | 2.70 MJ 646 Kcal |
| Fat | Not more than 35% of food energy | Max | g | 25.1 |
| Saturated Fatty Acids | Not more than 11% of food energy | Max | g | 7.9 |
| Carbohydrates | Not less than 50% of food energy | Min | g | 86.1 |
| NME (non-milk extrinsic) Sugars ² | Not more than 11% of food energy | Max | g | 18.0 |
| Fibre/NSP (non-starch polysaccharides) ³ | Not less than 30% of calculated reference value | Min | g | 5.2 |
| Protein | Not less than 30% of RNI ⁴ | Min | g | 13.3 |
| Iron | Not less than 40% of RNI | Min | mg | 5.9 |
| Calcium | Not less than 35% of RNI | Min | mg | 350 |
| Vitamin A (retinol equivalents) | Not less than 30% of RNI | Min | µg | 185 |
| Folate | Not less than 40% of RNI | Min | µg | 80 |
| Vitamin C | Not less than 35% of RNI | Min | mg | 13 |
| Sodium | Not more than 33% of SACN recommendation | Max | mg | 786 |
| Fruit and vegetables | 1/3 of 5 portions per day | | Portions | 2 |

¹ Estimated average requirement

² These are added sugars rather than the sugar that is integrally present in food (e.g. table sugar, honey, sugar in fruit juice and soft drinks)

³ Here calculated as 8g per 1,000 kcal

⁴ Reference nutrient intake

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**HOW CAN SCHOOL INFLUENCE CHILDREN'S
FOOD CHOICE AND IMPROVE THEIR DIET?**

Prof. Dr. Isabelle LOUREIRO

How can school influence children's food choice and improve their diet?

By **Prof. Dr. Isabel LOUREIRO, M.D., Ph.D.**
Co-ordinator of Health Promotion and Protection
School of Public Health
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SPEECH

1. Eating: a health determinant

Appreciated as a vital factor and a source of pleasure and sharing, food is much more than nutrients: it has a special meaning for each person and group and it is a trace of identity. Eating is very dependent of private life, circumstances, and the way it is handled.

Educating for eating well is one of the dimensions of the whole educational process, since nutrition is one of the most important health determinants by means of public policies, intersectorial work and empowerment of the communities and individuals.

Just to mention two of the main causes of death in the European Union, it is estimated that more than a third of deaths due to cardiovascular disease in people under the age of 65 are attributable to diet¹ and that between 30 to 40 per cent of cancers can be attributed to dietary factors.²

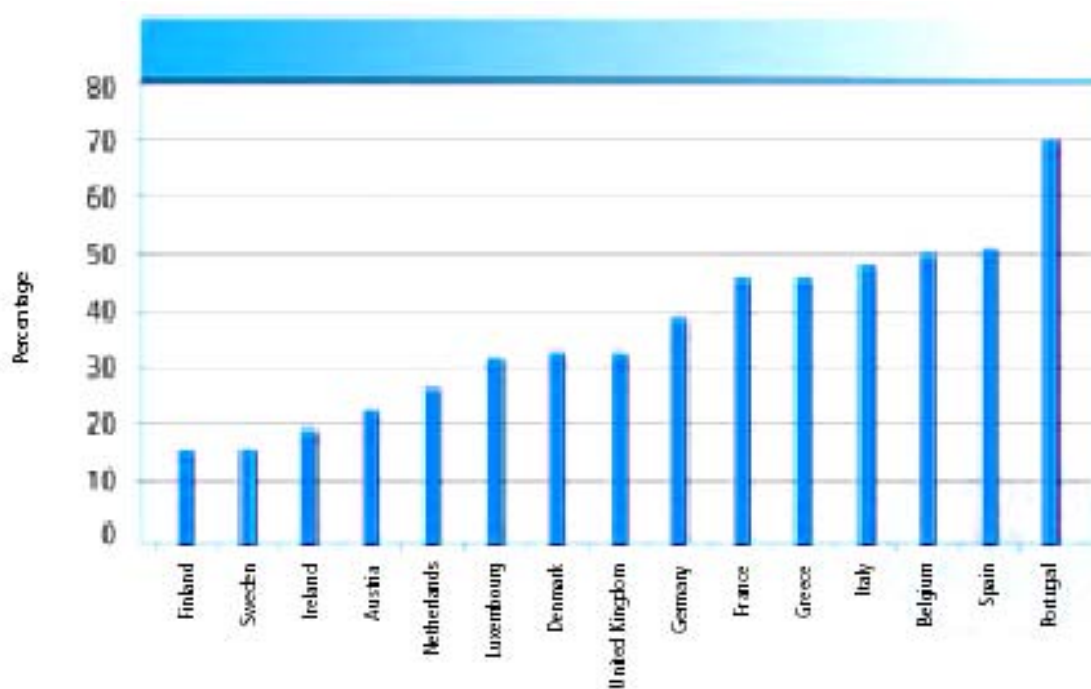
But eating can be salutogenic³ – either from a physical perspective or a mental one. There are foods, such as fruits and vegetables, which can prevent some of these diseases as there are opportunities around eating which can structure the personality and reinforce the sense of coherence through affective bonds, family environment, coherence between messages and behaviours coming from adults.

Accordingly to the Institute of Public Health in Sweden the total percentage of DALYs (disability-adjusted life-years) related to poor nutrition and physical inactivity is 9,7%.⁴

Portugal and Italy, according to the WHO Health Report 2002,⁵ are the greatest consumers of fruit and vegetables in Europe. But Portugal also has the most sedentary population in the Region.

| Group of countries | Vegetables (g/person per day) | Fruit (g/person per day) | Fat (% of daily intake) |
|---|---|------------------------------------|--------------------------------|
| Italy and Portugal | 243 | 196 | 30 |
| Czech Republic, Hungary and Slovakia | 239 | 180 | 35 |
| Croatia, Slovenia and "the former Yugoslav Republic of Macedonia" | 241 | 155 | 37 |
| Austria, Belgium and France | 177 | 167 | 38 |
| Baltic countries | 198 | 176 | 41 |
| Nordic countries | 104 | 168 | 36 |
| Azerbaijan, the Republic of Moldova and Ukraine | 157 | 97 | 24 |
| Kazakhstan, Kyrgyzstan and Uzbekistan | 159 | 40 | 28 |

Percentages of people in the EU countries who exercise insufficiently to benefit health (less than 3.5 hours per week), 1997



2. What the literature says about how to improve youth eating behaviour

According to a review on nutrition education research,⁶ effective programmes to facilitate voluntary adoption of food and nutrition-related behaviours that are conducive to health and well-being use a combination of contemporary models of individual, social and environmental change. In young children, behavioural strategies included exposure to foods in a positive social context, modelling by peers and adults and appropriate use of rewards. For older children behavioural strategies included self-assessment, clarifying expectations and values, personal goal setting, and choosing among alternatives.

Critical ability seems an important variable to influence the ability to choose foods.⁷ It has been associated with better food choices. Raising critical ability requires recognition of the rights of the child to express her/his points of view. Critical ability is raised through a systematic reflection on different situations, becoming aware of one's own thoughts and feelings, and confronting them with the knowledge acquired about the issue. It requires giving children the opportunity to learn, observe, judge, and choose by themselves.

It is important to have room for experiments or learning about nutrition can become "dull" instead of pleasant.⁸ To maintain interest on learning about foods, shifting from nutrients and focusing more on social dimension and personal living, can be a good learning strategy. As Levy-Strauss referred⁹ "food is good to think".

An empowerment approach that includes enhancing personal control and self-efficacy proved to influence several health behaviours, including dietary choices. The whole person is a total and the values of each other determine behaviours in a systemic interconnection. For instance, people's own body image may have a strong influence on the eating habits, especially among adolescents, (or as smoking or non smoking) can be chosen to give a mark of a certain style or to praise health; therefore, if so, it is expected that other health behaviours will be adopted.

Reducing actual and perceived barriers to healthful choices remains an important public health objective. In a recent research about predicting adolescents' fruit and vegetable intake, Lytle and collaborators (2003), besides mentioning the importance of some predictors like subjective norms, knowledge, spirituality/religiosity, usual food choice and parenting style, concluded that the greater the barriers perceived, the fewer fruits and vegetables consumed.¹⁰

The association between physical environmental-level factors and youth behaviour is clear in several studies.¹¹ Health promotion does not primarily address the individual: the main effort is to change and develop the physical and social environment.¹²

3. Philosophy and dimensions of HPS. Healthy eating: a Human Right

The project of Health Promoting Schools (HPS) finds its roots in the Ottawa Charter (WHO, 1986). Many values and practices were recognized as crucial for the development of health for all such as participation, equity and empowerment. The

Charter outlines a comprehensive strategy for health promotion through five interactive ways:

- building healthy public policy
- creating supportive environments
- strengthening community action
- developing personal skills
- reorienting health services.

HPS also fulfils the intention of the Convention on the Rights of the Child. In n.1, article 12 it is written:

"States Parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child".

In article 13 n. 1 the Convention it is stated:

"The child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice".

The same Convention also calls the attention for several measures to be taken by the States Parties, concerning the health of the child, such as (article 24, n. 2. a).e):

"to ensure that all segments of society, in particular parents and children, are informed, have access to education and are supported in the use of basic knowledge of child and nutrition, the advantages of breastfeeding, hygiene and environmental sanitation and the prevention of accidents".

Strategies for developing schools into health promoting settings put special emphasis on the following aspects:

- working for empowerment of students, teachers, other school staff, parents and other members of the community
- investing in social capital (creating and reinforcing local networks, optimising local resources, increasing participation and family cooperation, sharing experiences and responsibilities)
- improving school organisational dimension for an holistic and comprehensive approach to health promotion through:
 - developing the ability to make a health diagnosis, select priorities and make a relevant plan of action

- integrating health issues into the curriculum
- using participative pedagogical methodologies
- investing in the improvement of a healthy environment
- building partnerships, mainly between the health and educational sectors and municipalities
- advocating relevant policies at all levels
- respecting the psychological and intellectual child development on choosing the messages and the methods of communication.

4. What makes sense on raising children (paternalism/empowerment)

Any intervention in a specific field, like nutrition, cannot be only focused on foods since eating behaviour also reflects how people control their instincts, care about themselves or how available they are for sharing with others. The way people eat shows how they relate with others, how much time and importance they give to it, what kind of cultural background they have, what is their economic situation. At home parents give messages to their children through the investment they put into mealtimes, including their ability to organise and plan the meal. It is also possible that they look for healthy alternatives in the short time they may have.

Short time to prepare foods should be taken into account not only by the industry but also by educators. Facilitating the acquisition of competencies of choice and preparation of quick meals is included in the learning objectives of nutrition education. This can also be a subject for local policy.

The HPS approach of improving eating behaviours is focused on enhancing health, besides reducing risk. The expected outcomes usually are to get specific behaviours and to improve the ability to make healthy choices; but an overall attitude towards the self as well as the knowledge and motivation to choose a healthy behaviour is required. Physical activity cannot be disregarded when looking for a body balance. As comprehensive health education, several behaviours are often targeted such as physical activity or smoking. Keeping them depends on a true personal will.

Empowerment in health promotion is imperative. According to Antonovsky, central to the concept of salutogenesis is the Sense of Coherence (SOC).

For the process of raising children, the SOC approach seems appropriate when we think about the importance of the sense of meaningfulness (motivational component), the sense of comprehensibility (cognitive processing of stimuli), and the sense of manageability (cognitive emotional processing) - the three components of this model.¹³

School menus should take into account pupils' preferences, eating habits and values related to foods and meals. Nutrition education should start from there to be meaningful. Participation in decision-making has to be socially recognized as relevant. "Individuals' values form an important part of the motivation system".¹⁴

Coherence between messages, adult behaviour and offer, at least in school and at home, contribute to consistency; within the school it is crucial that messages learnt in the classroom match what and how foods are presented at the buffet and /or canteen. For the component of manageability, nutrition problems and socio-economic characteristics of the community, along with the knowledge about nutrient and caloric needs, are basic information to understand if manageability is possible. Capacity building is important to make students feel in control, like getting competencies for making a recipe, taking decision about what foods should be acquired for the buffet or have good manners at the table. Teachers and school have to find ways to get pupils interested in choosing healthy foods, learning by doing and allowing their creativity as well as testing their self-efficacy on preparing snacks and meals. The belief that resources are available depends on one's own resources and other's resources or belief on a higher power that can assist in successfully dealing with difficulties.

One of the main reasons teachers give for not making the canteen or the buffet an atelier for nutrition education (giving opportunities to the students for developing competencies of healthy choices, preparation of snacks and cooking foods) is the lack of human resources and budget to acquire the adequate equipment and make some physical changes in the environment. In any case, many things have been done even with these difficulties.

National and local policies are also needed to assure the sense of manageability. A national policy to regulate the requirements about the safety of the environment, specifically on production and manipulation of foods, regulations about nutrition at schools, with local accountability, should be compulsory. Publicity regulation is another responsibility for the government.

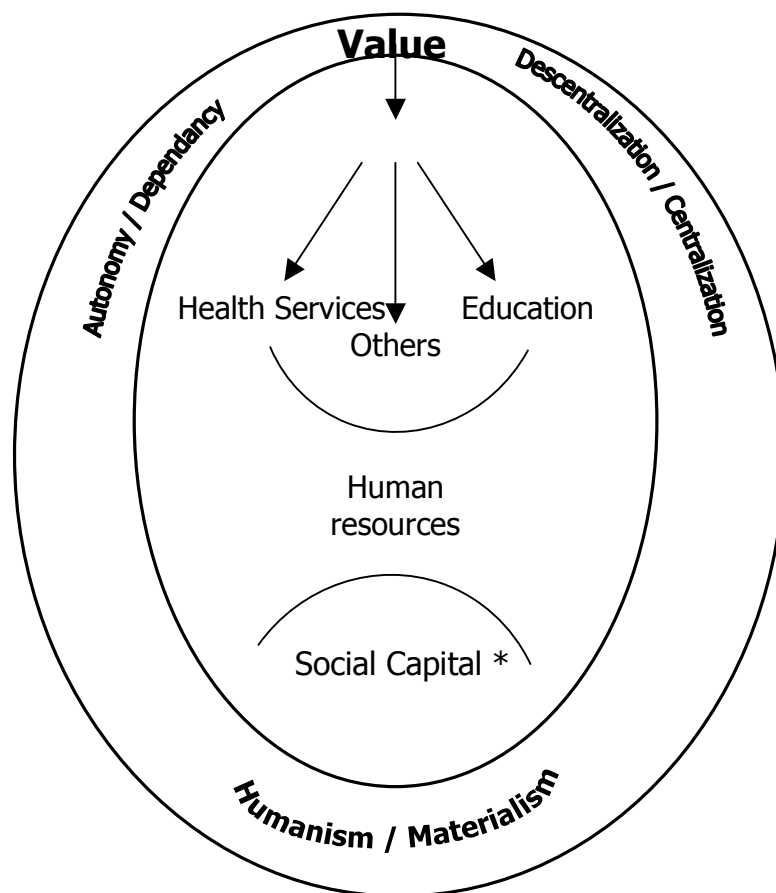
With an empowerment approach, decision-taking is assumed at all levels and the capacity of social organisation increases by growing autonomy, self-efficacy and networking. Accordingly to the level of empowerment, the quality of democracy and civic participation determine, by level of social capital, a potential to produce positive changes.

5. Example of a pilot project with schools in Portugal

The priorities identified by the schools and health centre members of the HPS network in Portugal

It is not surprising that nutrition education appears as the main priority since one of the five dimensions of HPS in Portugal is the ecological dimension where teachers include nutrition.

Level of social empowering



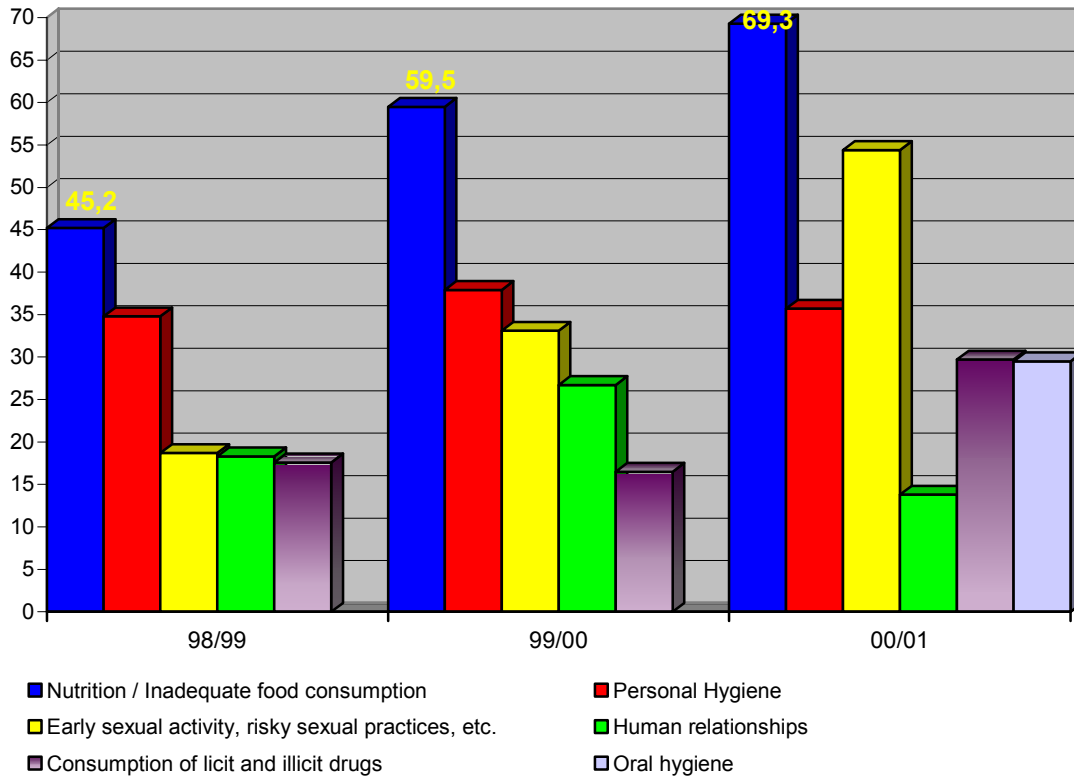
Structural *
 Connection
 Integration
 Social organisation

Cognitive / Affective*
 Valuing, reciprocity
 Level of confidence
 Perceived social responsibility

Civic participation
 Democracy

The following graphs present the priorities established by the HPS network in the school years 98/99 till 2000/2001:

Table I – Priorities decided by schools and health centres



n= 667

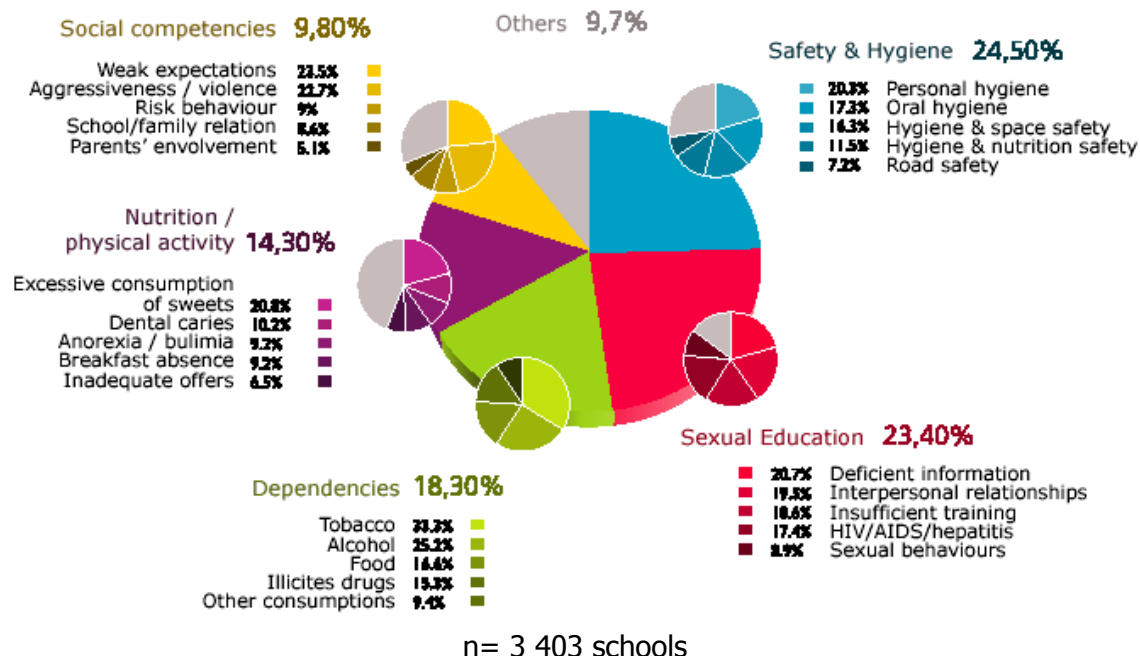
n= 774

n= 1947

It should also be taken also into account the increased number of primary schools coming into the HPS network.

In the school year 2001/2002 the impact of policy about sex education, which became compulsory that year, was evident. To better understand what teachers and health professionals had in mind, when they selected priorities, a more analytic study of the problems was done. It is interesting to observe the awareness about the systemic relationship among the different areas:

Table II - Priorities decided by the schools & health centres 2001 / 2002



Nutrition appears not only as an independent entity but it is also included in other areas like "addicted behaviour" and "safety and hygiene".

An intervention in a social system is effective when it helps to increase the awareness of problems and the capacity to solve them.¹⁵ This is why the philosophy of the National Support Centre of the HPS network is to give support to the schools and health centres in order to improve their situation identified in their own diagnosis.

Pilot project

From the school year 1999/2000 to 2001/2002 a pilot project involving 20 schools at the 5th and the 9th grades, was conducted in Portugal, by the Ministry of Education in collaboration with two universities – National School of Public Health/New University of Lisbon and the Faculty of Nutrition and Food Sciences/University of Oporto. It was a research/action project with a main objective: to get a blue print for action for all the schools concerning good procedures at the buffet to promote healthy foods. The focus was in the buffet because it is recognized that snacking is becoming more common rather than sitting down to a formal meal¹⁶ and students, as they are getting older, tend to use the buffet more often than the canteen.

Methods

The schools were selected accordingly to the following criteria: having considered nutrition education as a priority, having included it in the School Educative Project,

having answered a questionnaire about their actual food consumption, and having shown a will to participate. Equitable distribution by county was also considered.

Several books were offered to the schools, the most relevant being: "Nutrition education recommendations for the Portuguese population" (1997), the translation of: "Planning and evaluating nutrition education in schools (1998) (with a poster on "Nutrient Ingredients" from the "Healthy eating for young people in Europe: a school based nutrition education guide" (2000)), and the Portuguese "Manual for Health Education about Eating" (1993).

Project methodology was applied by each school; starting by the diagnosis, for which the translated version of "Planning and evaluating nutrition education in schools" (1998) was widely used, all schools had to decide upon their priorities, objectives and strategies. Pedagogical conditions differ from school to school, but each of them had a Food Team (composed by teachers, students, other school staff, and, in some cases, parents and health professionals from the health centre or Regional Health Administration).

According to Keith Tones,¹⁷ the registers of what happens can only be assessed in practice, recording what actually happens in the sessions. This is a work to be compiled about how to work nutrition education in a transversal curriculum – health promoting project - integrating nutrition in different disciplines.

Training school staff was mainly focused on food safety and hygiene, project methodology applied to nutrition education and oncology prevention.

Results

The degree to which teachers implemented the curricula depended on each teacher, students' needs and selected on strategies in each place. Creativity was stimulated and it was the analysis of the different information - the 5Ws + H formula (Who did What to Whom, When and Where – and How?) - together with the other strategies that contributed to produce a proposal to the Ministry of Education. The results of the process of the pilot-study were adopted for the official curricular guidelines for this school level. These guidelines contain several suggestions for activities derived from the proposal. Some examples included in the official school curriculum:

- importance of food balance (analyse of food labels, energy content, energy balance, etc.)
- research on local products and gastronomy
- study of food history and literati texts and recognize our identity through food consumption (Mediterranean diet)
- debates about the effects of unbalanced food consumption on health (include anorexia, bulimia, obesity, hunger)
- analysis of food diagrams (food wheel, Mediterranean pyramid)

- exploring the social impact of fast food and the role of publicity, decomposing and rebuilding it for a higher consumer literacy
- transversal critical approach of *media*.

The chemical composition of foods (nutrients) was remitted to Physics-Chemical Sciences discipline.

Different strategies were used by each school on physical environment at the buffet, accordingly to what was felt as the most relevant in each situation. They produced an impact on the consumption of some relevant foods.

Table III

| Foods | Type of change on consumption | Promoting strategy | | No intervention | | Total | |
|-------------|-------------------------------|--------------------|-----|-----------------|-----|-------|-----|
| | | n | % | n | % | n | % |
| Bread | + | 7 | 78% | 0 | 0% | 7 | 70% |
| | = | 1 | | 1 | | 2 | 20% |
| | - | 1 | | 1 | | 1 | 10% |
| Fruit | + | 5 | 56% | 0 | 0% | 5 | 42% |
| | = | 4 | | 3 | | 7 | 58% |
| Yogurt | + | 12 | 92% | 1 | 33% | 13 | 81% |
| | = | 1 | | 2 | | 3 | 19% |
| Milk | + | 5 | 83% | 4 | 80% | 9 | 60% |
| | = | 1 | | 5 | | 6 | 40% |
| Sweets | + | 6 | 67% | 0 | 0% | 6 | 38% |
| | = | 3 | | 5 | | 8 | 50% |
| | - | 3 | | 2 | | 2 | 12% |
| Chocolates | + | 7 | 88% | 0 | 0% | 7 | 58% |
| | = | 1 | | 3 | | 4 | 33% |
| | - | 1 | | 1 | | 1 | 8% |
| Soft drinks | + | 6 | 60% | 0 | 0% | 6 | 55% |
| | = | 4 | | 1 | | 5 | 45% |

Eating more fruits and dairy products and fewer sweets happened mainly where, besides the common initiatives used by the pilot-schools, there was a combination of change in the availability and variety of foods at the buffet: less for the undesirable products and higher for the desirable.

Change in price also affected dairy products consumption. In any case, considering the small number of cases under study, it is not possible to make a clear conclusion about the impact of each strategy. Nevertheless, the results suggest that school intervention on physical environment may have a positive change on food consumption.

Nevertheless, it seems important to remind that each school level, different geographical place, local food habits, and socio-cultural identities demand different strategies. Portuguese schools, for instance, should try to maintain and recover the Mediterranean diet, a healthy eating tradition.

BLUE PRINT FOR SCHOOL BUFFET ACTION

Guidelines for promoting healthy eating through the school buffet

Prerequisites:

- Include nutrition education as a priority in the School Educative Project
- Be consistent with class curriculum
- Display a variety of healthy foods
- Show a will and creativity to mobilise the school community
- Make organisational changes to allow effective students' participation with the collaboration of school staff and quality control on food acquisitions
- Establish a clear nutrition education policy for the buffet with the contribution of school community.

Facilitating factors:

- Assure democratic management allowing co-operation between directive board, teachers, students, and other school staff
- Build a working team responsible for the buffet representing the different agents for nutrition education within the school
- Establish consistent links between the functional organics of the buffet and the curriculum development activities allowing the buffet as a facilitating place – an atelier - to use active and participative methodologies
- Display relevant information in a way that is visible, comprehensible and pleasant to look at;
- Establish prices to make the desirable food products more accessible and display them at the buffet in a visible way;
- Stimulate and organise the participation of students to select the foods to be acquired and displayed at the buffet;
- Students should find creative ways of marketing healthy food products;

- Inform parents periodically about changes in food consumption and what is expected from them.

Complementary measures:

- Train school staff in food hygiene and interpersonal relationships
- Use of appropriate clothing
- Show esthetical concerns to improve the pleasure of using the buffet.

Selection of food products:

- Preference should be given to products rich in complex carbohydrates, fibre, vitamins, minerals and poor in fat and sugar.

Selection of foods should be based in the National Dietary Guidelines and country food culture. Considering the results of scientific research, as a common guideline, the increase of fruits and vegetables should be adopted by all.

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**HEALTHY EATING IN THE TRADITIONAL SCHOOL MEALS
SYSTEM □ THE ROLE OF THE PRIVATE
FOOD SERVICE OPERATOR**

Mr Richard COUDYSER

Healthy eating in the traditional school meals system □ the role of the private food service operator

By **Mr Richard COUDYSER**

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Introduction

Session No. 2 is concerned with how to provide healthy food in schools.

A number of key issues were raised in the introduction to the session. From a catering company's standpoint four main ideas should be underlined:

First, promoting healthy eating in schools necessitates the existence of high-quality, efficient school meals services. For private catering operators this translates into stricter contractual requirements to:

- offer balanced, healthy menus;
- create conditions conducive to the dissemination of good eating habits;
- give pupils the freedom to make healthy food choices;
- involve pupils in composing their meals once they are of an age to do so.

Second, the observation that responsibility for healthy meal provision has gradually shifted from the parents to the school. In other words, the school canteen is now subject not only to an obligation of means, but also to an obligation of results and is constantly being judged by parents, who have become very demanding - and even prying - as to the quality of school meals.

Third, there is a cultural dimension peculiar to each country. Eating habits, the importance attached to lunch hour and attitudes towards private companies delivering public services vary from one country to another. It is for this reason that the basic model of school meals provision differs in northern Europe, the United Kingdom and France.

Fourth, promoting healthy eating in schools largely depends on the public-private partnership's ability to delimit clearly the fields of competence of the client public authority and the private operator, to listen to each other and to work together in pursuit of shared objectives.

However, this is an area where debate may be influenced by ideology. In France, but doubtless also in other European countries, some people are extremely wary of private operators. They believe that in a private company the profit imperative is, by nature, antithetical to satisfaction of a public service need, such as provision of school meals. We are all familiar with received ideas along the lines that the profit motive prevents

private operators from taking innovative steps, which might reduce their margin, or that responsibility for school meals should continue to lie with the public authorities and private operators should confine themselves to meal production and delivery.

Although such hackneyed opinions die hard, it must nonetheless be acknowledged that there are intrinsic advantages to privatising school meals. A private company can harness its financing capacity to the public authority's needs. It is on this very principle that the system of delegating public services as we know it in France is based. A private firm is often more responsive and more flexible than its public counterpart. It is also capable of innovating, developing new and healthy school meals service concepts.

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Our aim today is to answer the question: What should be the private food service operator's role in providing healthy food in the traditional school meals system?

Sodexo is the world and European leader in the catering services market. It is present in 74 countries on almost 25,000 sites, which has enabled it to develop expert know-how in this field of activity, of which school meals are one aspect.

During the first part of my address I intend to set the scene. I shall describe the French school meals system, focusing on the position and role of private food service operators. (1)

We shall then see that, like other European countries, France is not immune to the consequences of the excesses of the food-products offer, nor to changes in children's eating habits. (2)

How does Sodexo, as a private food services provider, respond to these challenges both in designing its menus and in the field of nutrition education? (3)

Sodexo's objective is to ensure that children's nutritional requirements are met, and we shall look at the results of a newly released survey on healthy eating, conducted by the Sodexo Research Institute into the Quality of Daily Life in 2002 among UK schoolchildren and their parents. (4)

1. Presentation of school meals services: Is there a model form of school canteen in France?

1.1. Key figures concerning school meals in France

- Of some twelve million pupils at nursery, primary and secondary level, in the state and private sectors, one in every two takes school meals, giving a total of six million, including three million in primary school
- Taking account of the number of canteen working days, it is estimated that each pupil eats 140 school meals per year

- One billion meals are served annually in 23,000 canteens (for 40,000 schools offering a school meals service)
- Catering companies prepare almost one-third of the meals served, giving a total of approximately 300 million per year.

1.2. Shared management of school meals provision

- In the case of nursery and primary schools the entire system (premises, equipment and operation of the kitchens) is the municipal authority's responsibility
- At secondary level, the education ministry is responsible for operation of kitchens, which are staffed by state employees. In lower secondary school (*collège*) the premises and equipment are the responsibility of the *département*-level authority (the *conseil général*), whereas in upper secondary school (*lycée*) they are the responsibility of the regional authority (the *conseil régional*). As part of the move towards greater decentralisation, the French government is currently considering transferring responsibility for operation of kitchens in secondary schools, along with the relevant staff, from central government to local government
- In private schools, from nursery to upper secondary level, the head is responsible for the entire school meals service.

The manner in which school meals provision is organised in France accounts for the variance in levels of reliance on private operators, which can be estimated as follows¹:

- 61 % of all private schools
- 51 % of state primary schools
- 5 % of state secondary schools.

1.3. Reliance on a catering firm to provide school meals for children aged 3 to 11 attending state schools

As already mentioned, three million children in nursery or primary school take school meals.

The municipal authority, which has full responsibility for school meals provision (premises, equipment and operation of kitchens), can choose between managing the service itself (direct administration) or bringing in a private supplier.

In half of all schools a private firm is entrusted with the task of managing school meals. This means that 1.5 million children, aged between 3 and 11, are concerned every day.

From a legal standpoint, use of a catering services company may take the form of conclusion of a public supply contract or a public-service delegation, most often under a concession or an operating lease.

¹ Source: GIRA, 1998

The municipality and the catering firm sign contractual specifications, which govern their relations. These set out in detail the municipal authority's requirements and the sub-contractor's obligations.

1.4. The composition of school meals is determined by a circular issued by the French education ministry on 25 June 2001

This circular, entitled "Composition of school meals and food safety", refers to the nutritional imbalance noted in some school canteens, charged with serving meals "too rich in proteins and fats" with "inadequate coverage of minimum calcium and iron requirements" and insufficient dairy products, fruit and vegetables.

Based on these findings, the ministerial circular makes a number of recommendations, which aspire to "restructure meals to ensure that they include fish or meat and that priority is placed on green vegetables, cheese and fruit".

The basic underlying principle is an increase in provision of high-fibre foods and vegetables and in iron and calcium content (at least 150 mg of calcium per portion), and a decrease in the lipids intake.

The circular also addresses the issues of nutrition education and taste education.

2. Like other European countries, France is not immune to the consequences of the excesses of the food-products offer, nor to changes in children's eating habits

2.1. Child obesity is rising sharply in France

In 2000 INSERM (the French national institute for health and medical research, a public body attached to the Ministry of Health) published a general survey, entitled "Identifying and preventing obesity in children", which drew comparisons between France and the US.

Today, over 20% of American children between 6 and 11 are obese. In France, the figure is 10 to 12% for children between 5 and 12. For the past thirty years France has, so to say, been catching up with the US, a trend which accelerated around 1992-95, when 6% of French children between 5 and 12 were obese.

It should be underlined that in all the known studies no statistical link has been established between taking school meals and being overweight.

2.2. The rate of obesity mainly reflects a change in the food-products offer and new eating habits, affecting all children

Among the underlying causes of child obesity, we shall disregard the increasingly sedentary way of life in western society, with a reduction in physical activity, since private catering services suppliers have too little capacity to influence such behaviour for the subject to be worth discussing here.

However, my company believes that the school caterer must, at least, integrate in its thinking and approach not just trends in food itself, both quantitative and qualitative, but also the emergence of new eating habits ("snacking", etc.).

The current situation is a cause for considerable concern:

- food allergies and food intolerance are constantly growing
- children have been shown to find the school meals offer unappealing
- consumption of high-protein, high-energy foods is rising sharply and offsets the destructuring of meals
- children eat too much junk food (crisps, chips, ice-cream, etc.) - so-called "snacking"
- they also show a clear preference for fad foods - promoted through high-powered marketing campaigns - over traditional, more balanced foods
- the growing amount of time spent on passive activities (watching TV, playing video games, the Internet) both decreases daily physical exercise and enhances the destructuring of meals
- conversely, pressure to be thin is growing, and begins at an increasingly early age.

2.3. These new trends involve risks

2.3.1. For children these risks are:

- health problems: diabetes, cardio-vascular disease, bone decalcification, etc.
- psychological and social problems: for a child who is overweight food is a source of comfort, and he or she is therefore tempted to eat more, which will increase his or her problems, in particular social isolation
- loss of points of reference regarding food - taste, flavours, traditions, etc.

2.3.2. For families the risks are:

- feelings of guilt in view of their inability to find solutions
- difficulty in passing on the values attaching to mealtimes: learning to eat well for future health, conviviality, etc.

2.3.3. In terms of public health:

- The public authorities, at both EU and national level, have been slow to realise there is a problem and regard promoting healthy eating as a lesser priority than, for example, combating smoking among young people
- They are somewhat ill-equipped to deal with these matters: for example, children cannot be forced to eat more fruit and vegetables by passing a law;

- Although policies focusing on the supply of information and, above all, nutrition education appear to be the most effective means of promoting healthy eating, their implementation immediately encounters an obstacle of lack of resources: information campaigns cost money. Moreover, how can teachers, of whom a great deal is already asked, be motivated?
- The public authorities find themselves obliged to set objectives and to rely on third parties over whom they have little control - children, families, teachers, doctors, the food industry, caterers, etc. - to pursue those objectives.

3. Sodexo's commitments regarding menu design and taste and nutrition education

3.1. School meals are pivotal to the issue of the food-products offer and nutrition education

The school canteen constitutes an alternative place of learning, different from the home and the classroom.

Although it is true that of the 21 meals eaten per week only 4 or 5 are taken at school, the canteen may nonetheless be an ideal place to educate children's taste buds and teach them to differentiate what they eat. Unlike nutrition education in the classroom, forming part of the school curriculum, the canteen offers immediate opportunities for "practical work". In addition, on returning home, children can raise their parents' awareness of what in practice constitutes a healthy, balanced diet.

From the point of view of promoting healthy eating, the school canteen can fulfil two functions:

- it can directly influence food intake by offering children balanced menus and food products
- it can facilitate nutrition education by enabling children to see for themselves how their meals balance.

Sodexo has decided to treat these two functions as two priority objectives. We accordingly pay special attention to the design of the menus we offer children. We also help to train municipal catering staff in the pedagogic aspects of nutrition education and taste education.

3.2. How Sodexo perceives menu design

3.2.1. Our objectives and main commitments

Answering the nutritional needs of those partaking of our meals (children, adolescents, young adults) is a pillar of Sodexo's quality policy. To that end, we focus on three main objectives:

- taking the public health dimension into account: "learning to eat well for future health" is our credo

- contributing to nutrition education and taste education
- integrating the concept of eating for pleasure in menu design.

These objectives are reflected in our commitments regarding menu design:

- compliance with the standards and regulations in force and monitoring of any changes in them
- appraising user satisfaction on a daily basis for each menu choice in each school
- affording schools access to research results and advice provided by our panel of scientific advisers on nutrition
- encouraging consumption of fruit and vegetables by supplying ripe produce
- encouraging consumption of complex carbohydrates by giving bread a higher profile and offering original legume-based recipes
- encouraging consumption of fish, by including it more often on our menus (offering three fish choices over a two-week period).

3.2.2. Integrating the concept of eating for pleasure

To ensure eating is also a pleasurable experience, we have set ourselves specific criteria regarding menu design:

- use of seasonal dishes and products
- serving harmonised meals, taking account of food colour, texture and combinations
- direct appraisal of pupils' satisfaction:
 - ⇒ each school has a "tasting club": we bring together 12 children five times a year to test and approve new dishes and recipes which will be included on the menu over the following weeks
 - ⇒ a measurer which we call "C' mon goût": we measure the quantities actually consumed for each dish, each day in each school.
- the school managing body's menus committee, which identifies recipes and products to be improved
- seeking and creating new recipes with four well-known French chefs: Michel Bras, Jean-Michel Lorain, Olivier Roellinger and Jacques Chibois. One of the key focuses of this innovative approach is knowledge, cooking and seasoning of green vegetables.

3.2.3. Integrating health aspects

How does Sodexo take health into account in its menus?

- by ensuring compliance with the circular of 25/06/2001 on the composition of school meals and food safety;
- by encouraging consumption of fruit, vegetables, fish and complex carbohydrates;
- by providing information and advice through our panel of scientific experts on nutrition;
- by relying on a team of dieticians, who verify on a day-to-day basis that the meals we serve are balanced for the well-being of those who eat them.

3.3. Taste and nutrition education

Sodexo has set itself the task of helping to make children receptive to good eating practices and participating in educating their taste buds.

The success of this learning experience depends on a range of simple measures, involving in-class teaching, which must be followed up in the school canteen. On request, Sodexo can mobilise its nutrition expertise, culinary know-how and dieticians. This awareness-raising exercise must enable children to acquire the right habits. Nor are parents forgotten, since we do everything we can to encourage children to share their new knowledge with other family members.

We have developed specific schemes for what we call the "Small-but-big kids" (children aged 3 to 7) and the "Stars" (those aged 7 to 12).

3.3.1. "Small-but-big kids"

For this age-group, attending nursery school, great importance is attached to doing things "just like the big kids", but while retaining the little kid's advantages. The scheme targeting this age-group places emphasis on play-focused eating, making strong calls on children's imagination and encouraging them to experiment.

We offer these children what we call "fun menus", designed to heighten children's awareness of their senses (including touch via a menu you can eat with your fingers), to introduce them to the four basic flavours (sweet, salty, acid, bitter), to invite them to play around with colour (via multi-coloured, red, yellow or green menus) and to try different textures.

To educate their taste buds we propose a kid's buffet. Table by table, the children come to the buffet in turn where they are received by a member of the canteen staff, who offers them a portion of each dish.

In the classroom we work with teachers on food discovery education based on the theme "Going to the market". The pupils take turns at playing the roles of stall-holder and customer. They learn what products can be found at the fishmonger's, the cheese

shop, the greengrocer's, the baker's, and so on. They then learn to identify food categories and how these contribute to good health.

3.3.2. "Stars"

The "Stars" are children attending primary school, where the emphasis is on autonomy and developing a sense of self. Children in this age-group want to assert their personalities by making their own food choices in an environment which enhances their self-image and is in tune with the outside world. They are curious and open-minded and appreciate any initiative aimed at giving them an active role and making them responsible and in charge of their own choices.

For example, with our "European menus" the children discover the culinary specialities of a given European country. The canteen is decorated in that country's colours.

With "My-school's own menu", we aim to teach the children about healthy eating and citizenship. All the pupils in a school vote for their favourite menu, and the menu which wins the most votes is served in the canteen.

In the classroom context we propose "taste classes", with a CD-Rom "Taste and the five senses" serving as a teaching aid. Twelve sessions are time-tabled, during which the pupils voice their perceptions - their likes and dislikes. The way in which they express their preferences will gradually become more precise. Physical tastings take place, and the approach is multi-disciplinary since all the fundamental fields of learning are involved: language, history, geography, science and civics.

Ideally, the taste classes should culminate in establishment of a "Stars tasting club". Having received their tasting diploma, the children are now experienced tasters. Each session consists in tasting recipes and/or products. A Sodexho staff member prepares the food and runs the club in co-operation with a teacher or community worker. Each pupil is given a collection of the Stars' favourite recipes.

Children in this age-group are also given access to the "Nutricom" programme, which is a nutrition education software that they can discover in the school's computer room.

4. Case-study: Results of a healthy eating survey conducted by the Sodexho Research Institute into the Quality of Daily Life in 2002 among UK schoolchildren and their parents

4.1. Description of the survey

Since 1990 Sodexho's UK subsidiary has been publishing a school meals survey¹, conducted on a regular basis by the Sodexho research services². This survey is the most significant in quantitative and qualitative terms, and also the most ambitious, of the entire catering services industry. The 2002 survey was the seventh of its kind.

¹ the Sodexho School Meals and Lifestyle Survey

² the Sodexho Research Institute into the Quality of Daily Life (SRI)

Sodexo has taken this initiative because it is one of the main providers of school meals services in the United Kingdom and needs detailed, up-to-date knowledge of children's food preferences and lifestyles.

One of the merits of the 2002 report is that it comes eighteen months after the national authorities introduced nutritional standards for lunches served in school canteens.

These nutritional standards apply to all state nursery, primary and secondary schools in England. The aim is to protect children's health and promote their growth and development. Schools are required to comply with minimum standards concerning the types of food served, meal preparation methods and the frequency with which certain food types are included on the menu.

For the 2002 survey a representative sample of 1,608 children aged 5 to 16 was interviewed, as well as 1,413 parents.

4.2. The main findings of the survey conducted by Sodexo in the UK in 2002

- The frequency of eating chips has been falling regularly nation-wide since 1994. From three times per week in 1994 it had decreased to 2.25 times per week in 2002
- 68% of the children interviewed said their diet was very or quite healthy. This was 6% lower than in 2000
- 60% of parents thought the meals served by their child's school were very or quite healthy
- The top three reasons why children said their diet was healthy were, by order of importance, eating lots of fruit (50%), eating lots of vegetables (44%) and eating a balanced diet (20%). However, the survey results showed that overall consumption of fruit and vegetables by children was in fact very low
- 45% of children who said their diet was unhealthy attributed this to eating too many sweets and chocolates. 34% said it was due to eating junk or fast food, whereas 30% put it down to eating too many chips
- 37% of the children interviewed would be ready to choose healthy foods at school if the menu choices were more varied. 18% said the taste of healthy food options at school must be improved before they would choose them
- On average, fruit was eaten 3.88 times a week, compared with 3.79 times for vegetables. However, these frequencies rose to 4.12 and 3.89 respectively where the school had a food advisory committee
- More schools were dealing with healthy eating issues. In 2002, 68% of the children interviewed said these matters had been addressed during the school year, compared with 60% in 2000. Where the school had a food group, 84% of children said healthy eating was discussed in class

- 85% of parents considered it important or very important that schools raise their children's awareness about a good, balanced diet. 67% of parents said the principles taught at school had had a visible or fairly visible impact on children's attitudes at home, whereas the 2000 figure was 62%
- 47% of children said their school encouraged healthy eating, but this rose to 67% where there was a school food advisory committee. The survey therefore showed the proven success of food groups and committees, while highlighting the failure of policies pursued by schools without such bodies
- Of 7 million schoolchildren in the UK, only 790,000 are aware of the existence of food groups and committees, and less than 253,000 take part in them or are indirectly involved
- In conclusion, it can be said that UK children do know what a healthy diet is, but this does not mean that their eating behaviour follows the relevant criteria.

Conclusion

a) The fact that governments - whether the French government with its circular on school meals composition of 25 June 2001 or the UK government with the nutritional standards for school lunches introduced in April 2001 - deemed it necessary to lay down rules testifies to the lack of nutritional balance previously observed in school meals.

Although it is true that only four or five meals per week are taken at school, we believe that the school canteen can be an excellent place to educate children's taste buds and teach them about nutrition.

Nor does this situation mean that the school caterer is not obliged to ensure that all children taking school meals, whether attending state or private schools, are offered menus providing a perfectly balanced diet.

At all events, this is what Sodexho, aware of its public health role, seeks to guarantee by proposing balanced menus.

b) The private catering services operator cannot be made a scapegoat for the nutritional imbalances observed in some menus proposed in schools.

In France, for example, the fact that responsibility for managing school canteens is shared among many different operators can mean that catering companies are marginalised (private catering firms are all but absent from state secondary schools) and, more often than not, relegated to the role of mere production and delivery of meals (in state nursery and primary schools the relationship between the client municipal authority and the catering sub-contractor more closely resembles a top-down chain of command than a genuine partnership).

c) To meet the challenges of a varied, healthy diet and nutrition education, Sodexho has made innovation a key feature of its approach. This is why the menu choices we offer children incorporate a public-health dimension (learning to eat properly for future

health), without disregarding the need for a constant effort to improve tastes and flavours, which help to make mealtimes a pleasurable experience.

Moreover, to remain competitive vis-à-vis our rivals, we have chosen to focus on what our users have to say. It was for this reason that we conducted our first major survey of UK schoolchildren in 1994. This is also what we seek to do day-after-day in each school through measures such as the taste clubs and use of the "C' mon goût" measurer.

d) At a European level Sodexo wishes to help enhance knowledge of what constitutes a healthy, balanced diet for children. It also seeks to encourage the implementation of a global, multi-disciplinary approach in such matters.

It must be acknowledged that statistical and scientific knowledge of school meals is still too fragmented and embryonic. There are not really any surveys and findings covering the whole of the European Union. This shortcoming naturally has a negative impact on national and European policies to promote healthy eating.

Another obstacle can also be noted. Many parties are involved in promoting healthy eating in schools - teachers, paediatricians, politicians, parents, etc. However, their action more often than not lacks coordination because there is no global, multi-disciplinary approach.

With these issues in mind, Sodexo recently launched a European healthy eating programme concerning the fifteen EU member states plus Norway, Poland and Slovakia. This programme is being implemented in partnership with four major education sector players:

- the European association of paediatricians
- the European Trade Union Committee for Education (ETUCE), which brings together 81 teachers' unions
- the European Parents' Association (EPA), which represents 100 million parents
- a European network of elected representatives in local government.

The results of this huge survey will be made public in February 2004 in connection with a first European conference on healthy eating, aimed at initiating a public debate and fostering a multidisciplinary approach, involving all those participating in school life.

This event will seek to define joint objectives for all the groups of operators concerned by healthy eating in schools. These objectives will then be adapted to the individual countries, and a monitoring process will be implemented to gauge the effectiveness of the measures taken.

We therefore look forward to seeing you at this conference, which will take place in Brussels in February 2004.

**HOW TO PROVIDE HEALTHY FOOD IN SCHOOLS:
SCHOOL FRUIT PROGRAMMES AS A SHORT CUT TO
PROMOTING HEALTHY EATING IN SCHOOLS –
THE NORWEGIAN EXPERIENCE**

Mrs Anniken OWREN AARUM

**How to provide healthy food in schools:
school fruit programmes as a short cut to promoting healthy eating in
schools – the Norwegian experience**

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ABSTRACT

A national survey conducted in 1993 in Norway, found that the average fruit consumption among 13-year-olds was only about 2 portions a day. The Norwegian Directorate for Health and Social Affairs recommends "at least 5 a day". In Norway, school lunch for most children consists of open-faced sandwiches brought from home, and few students tend to bring fruit or vegetables as part of their lunch-packs. In 1996 a decision was taken to launch a pilot test of a school fruit subscription scheme for fruits and vegetables in primary and lower secondary schools (called "School Fruit"), like the school milk subscription scheme. The programme has now been introduced in 18 of Norway's 19 counties. This presentation will outline the experiences we have gained from this programme.

Physical availability, educational, financial and normative measures for increasing participation

The Schools Fruit programme is a public-private partnership, and it is being implemented in co-operation between the Norwegian Fruit and Vegetables Marketing Board and the Directorate for Health and Social Affairs, the county health authorities and private, local wholesale distributors. For NOK 2.50 (€0.30) a day, each participating pupil receives an apple, a pear, carrot, clementine, banana or other fruit at lunch. A comprehensive information and marketing campaign has been conducted targeting school administrators and staff, pupils and their parents, wholesalers and health service personnel. Great emphasis has also been placed on obtaining funding and legislation to promote school and pupil participation. In the past four years the programme has been granted NOK 10 million annually (€1.25 million) in subsidies through a collective agricultural agreement between Norway's farmer and the agricultural authorities. The schools themselves determine whether to offer fruits, vegetables or other food. The Directorate has drawn up official guidelines for school meals advising schools to offer fruit and vegetables as a supplement to milk and sandwiches. Regulations concerning the school environment recommend that these guidelines be observed. The challenge facing us is to exploit more effectively the opportunities that exist within the present framework in order to increase school participation.

Experience to date

Approximately 56 000 pupils in 830 schools participated in the programme in the spring of 2003. On average, about 35% of the pupils from schools that are participating in the programme subscribe to the school fruit scheme. This means about 28% of Norway's primary and lower secondary schools. The goal is that all schools should introduce a fruit and vegetable subscription scheme. Results from an intervention study ("Fruit and vegetables in the 6th form) show that participation in the school fruit subscription scheme yields an increase in consumption of 0.4 portions/day. Free access to fruits and vegetables increased consumption by 0.7 portions/day.

Evaluation of the programme by wholesalers, schools and parents has revealed that it is necessary to improve the quality of the entire commodity chain, with a broader range of products and top quality fruits and vegetables. Pilot projects in three counties, with a new, improved menu consisting of five different products each week and the provision of cool-storage units to schools free of charge, have yielded positive results. School participation has increased by 20% and pupil participation by 24% since the autumn of 2002 in these counties.

It is a dilemma that some pupils probably do not participate because of the price. The programme could conceivably increase rather than reducing social health disparities related to fruit and vegetable consumption. A White Paper on public health adopted in the spring of 2003 establishes that funds should be guaranteed for price subsidies of school fruit for all pupils who want to participate in the scheme and points out the need to document the effect of the subscription price on the intake of fruit and vegetables among children and adolescents.

Although much remains to be done before all schools in Norway have established school fruit programmes or similar schemes, we see that it is possible to increase participation by both schools and pupils substantially through various measures now being implemented.

SPEECH

The Norwegian Directorate for Health and Social Affairs is a subordinate agency under the Ministry of Health and the Ministry of Social Affairs. For many years the Department for Nutrition (formerly the National Council on Nutrition) has striven to ensure that school pupils have well-organised school meals, focusing on the following goals: all pupils should have at least a 20-minute lunch break, there should be adult supervision during the lunch break, food should be made available for pupils who have not brought a lunch from home, and lower and upper secondary schools should have canteens. In recent years, concentrated efforts have also been devoted to establishing a subscription scheme for fruits and vegetables in primary and lower secondary schools, called simply "School Fruit". In this presentation I would like to outline the experience we have gained from this programme and to what degree the programme contributes to increased intake of fruits and vegetables among children and adolescents. In closing I will try to summarize the present situation by identifying success criteria and some challenges ahead.

Why a school fruit programme?

The consumption of fruits and vegetables is lower in Norway than in many other European countries, and lower than the Norwegian recommendation of "at least 5 a day", or 3 portions of vegetables and 2 portions of fruit, for a total of 750g daily. Approximately 10% of the adult population eat "5 a day", with an average intake of 480g daily (Norkost 1997). Consumption of fruits and vegetables is somewhat lower among children and adolescents. 10%, 7% and 11% of 4-year-olds, 9-year-olds and 13-year-olds, respectively, have an intake of 500 g or more daily of these foods. On average, 4-year-olds consume 225g daily, while 9-year-olds and 13-year-olds consume 250g daily. The Norwegian meal pattern, which consists of sandwiches twice or three times a day and a hot meal only at dinner time, means that we must eat fruits and vegetables with our sandwiches in order to reach the desired intake of five a day.


School lunches primarily consist of a packed lunch from home. Until a few years ago, few primary and lower secondary schools had food available for pupils who did not carry a packed lunch, and few schools offered a fruit and vegetable subscription scheme. Whereas the majority of pupils in primary schools carry a packed lunch, only two out of ten bring a fruit or vegetable as part of that packed lunch. At the lower secondary level, only one in ten brings a fruit or a vegetable. Milk, on the other hand, is available at nearly all schools through a subscription scheme. Individual cartons of milk (2.5 dl) are distributed to all participating pupils at school every day. The dairies deliver the milk to the schools and offer the schools refrigerators on loan free of charge for milk storage, as well as employing persons who are responsible for contact with the schools.

Physical availability – a means of increasing intake

In 1996 a decision was taken to launch a pilot test of a school fruit subscription scheme. The goal was to increase the consumption of fruits and vegetables among children and adolescents from first to tenth form (these pupils are from 6 to 15 years of age) by offering them a fresh fruit or vegetable at school every day. Improved availability in schools is considered a key means of increasing the total intake among children. The school fruit programme is a subscription scheme, like the school milk subscription scheme, where pupils in primary and lower secondary schools sign up for a daily fruit or vegetable. The Norwegian Fruit and Vegetables Marketing Board and the Directorate for Health and Social Affairs are responsible for the programme. The Fruit and Vegetables Marketing Board co-operates with fresh produce wholesalers, while the Directorate co-operates with public health advisers on the county level to motivate schools to participate in the programme. Our goal is that all schools should introduce a fruit and vegetable subscription scheme. For NOK 2.50 (€0.30) a day, each participating pupil receives an apple, a pear, carrot, clementine, banana or other fruit for lunch. This price currently includes a NOK 1.00 (€0.13) subsidy. Some schools have introduced their own "fruit breaks". Wholesalers, school milk suppliers or local grocers deliver the fruits and vegetables directly to participating schools once or twice a week. The schools are responsible for payment, storage and distribution to the pupils. Until this year, the schools were also responsible for providing cool storage.

Educational, financial and normative measures for increasing participation

Although the main means of increasing participation in the school fruit programme is physical availability, a comprehensive information and marketing campaign has been conducted targeting school administrators and staff, pupils and their parents, wholesalers and health service personnel. Information brochures are distributed to the various target groups, and advertising campaigns for school fruit were run for two consecutive years in local newspapers and professional journals. Public health advisers in the counties have instituted various measures to motivate schools and parents to participate. The web page for the school fruit programme www.skolefrukt.no provides up-to-date information to schools, suppliers, health personnel and parents. However, funding constraints have limited the scope of the information activities.

Since the pilot project was launched, great emphasis has also been placed on obtaining funding and legislation to promote school and pupil participation. In the past four years the programme has been granted NOK 10 million annually (€1.25 million) in subsidies through the collective agricultural agreement between Norway's farmers and the agricultural authorities. 85% of this amount has been earmarked for price subsidies; these subsidies have meant price reductions of €0.13 per  per day for about 70 000 pupils, or 12% of the total number of pupils in this age group. This earmarking of funds has entailed limitations in the marketing and development of the programme. A White Paper on public health adopted in the spring of 2003 establishes that funds should be guaranteed for price subsidies of school fruit for all pupils who want to participate in the scheme, as well as funds for administration and marketing. This is an important breakthrough for the programme. The cost of making this programme available for all pupils in the primary and secondary schools, subsidised according to today's prices, is estimated to be approximately NOK 70 million (€1 million) annually. Regulations have been issued governing the approval of suppliers and the subsidy scheme.

The schools themselves determine whether to offer fruits, vegetables or other food. The Directorate has drawn up official guidelines for school meals advising schools to offer fruit and vegetables as a supplement to milk and sandwiches. Regulations concerning the school environment recommend that these guidelines be observed. The challenge facing us is to exploit more effectively the opportunities that exist within the present framework in order to increase school participation.

Participation by schools and pupils

The school fruit programme, which was launched as a pilot project in a single municipality in 1996, has now been introduced in 18 of Norway's 19 counties. Approximately 56 000 pupils in 830 schools participated in the programme in the spring of 2003. This means about 28% of Norway's primary and lower secondary schools and 9% of all the pupils in this age group were involved. On average, about 35% of the pupils from schools that are participating in the programme subscribe to the school fruit scheme. There was an increase in participation by schools and pupils until 2001/2002. At that time the programme was extended to counties with difficult conditions for distribution, and the number of suppliers increased to more than 100. In

addition to those participating in the school fruit programme, we know that a number of schools have established their own schemes, such as sale of fruits and vegetables in the school canteen, distribution of sliced fruit on certain days of the week, or similar strategies, although we have no knowledge of the scope of such schemes. Evaluation of the school fruit programme by wholesalers, schools and parents revealed that it was necessary to improve the quality of the entire commodity chain, with a broader range of products and top quality fruits and vegetables. Pilot projects in three counties, with a new, improved menu consisting of five different products each week and the provision of cool-storage units to schools free of charge, have yielded positive results. School participation has increased by 20% and pupil participation by 24% since the autumn of 2002 in these counties.

Does the programme result in increased consumption?

The University of Oslo has investigated the effect of the school fruit programme on the consumption of fruits and vegetables in an intervention study ("Fruit and vegetables in the 6th form") with the objective of developing effective strategies for promoting sufficient intake of fruit and vegetables. The study was conducted among 12-year-old pupils in 38 primary schools. At ten of the intervention schools, the pupils were served fruit and vegetables free of charge during one year. The intervention components were a classroom curriculum in home economics that included Internet-based learning, fruits and vegetables made available at school through the school fruit programme, and a family component with information both at home and at school. Preliminary results show that participation in the school fruit subscription scheme yielded an increase in consumption of 0.4 portions/day. Targeted instruction alone did not influence consumption. Among the pupils who had access to free fruit and vegetables, consumption increased by 0.7 portions/day.

Data from a school meal survey in 2000 indicate that establishing a school fruit programme also prompts more pupils to bring fruit and vegetables from home. The results of market surveys show that 80% of all parents would like the schools to offer subscription schemes for fruits and vegetables (SSB 2001), but no parents are willing to pay more than the current price. Half of the parents would like the price to be lower than at present or free of charge (2003). Process evaluation data show that insufficient time for administration, a lack of cool-storage facilities, and scepticism about parental payment because not all pupils can participate are the most important arguments against the school fruit programme at schools that are not participating in the scheme.

Challenges ahead

In order to increase participation in the programme by schools and pupils, variation and top quality products must be ensured throughout the country, new products that are ready to be served must be developed, the schools' administration of the programme must be simplified, and communication with schools, parents and local authorities must be improved.

It is a dilemma that some pupils probably do not participate because of the price. The frequency and time of payment may influence participation. The programme could conceivably increase rather than reducing social health disparities related to fruit and

vegetable consumption. For this reason the White Paper on public health points out the need to document the effect of the subscription price on the intake of fruit and vegetables among children and adolescents.

Summary

A school fruit programme has now been established in 28% of Norway's primary and lower secondary schools, but the goal is for all schools to make fruit and vegetables available. We have seen that the programme inspires schools to design their own local adaptations, but the scope of such schemes has not been charted. Data from "Fruit and vegetables in the 6th Form" shows that participation in the school fruit programme increases the consumption of fruit and vegetables. Moreover, it appears that the programme can prompt more pupils to bring fruit and vegetables from home. Although much remains to be done before all schools in Norway have established school fruit programmes or similar schemes, we see that it is possible to increase participation by both schools and pupils substantially through various measures now being implemented. Thus the school fruit programme is an important means of influencing the intake of fruits and vegetables among children and adolescents, and there is political resolve to fund further development of the school fruit and vegetable scheme.

Success criteria:

- Employ a range of different measures (normative, educational, material)
- Create an open dialogue with suppliers; draw up a contract specifying quality and variation
- Circulate useful experience and examples of organisation among schools
- Offer practical help to schools
- Establish regular contact persons at the schools
- Use the media and local collaborating partners in information activities
- Be patient.

THE (HOME-MADE) LUNCHBOX – HAS IT GOT A FUTURE?

Mrs Doris KUHNESS

The (home-made) lunchbox – has it got a future?

By **Mrs Doris KUHNESS**

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ABSTRACT

With young people we can find three main problems in regard to their health. These are smoking, irregular diet and lack of exercise. Besides eating food with essential nutrients, eating regularly is an indicator of healthy nourishment. On the basis of that we must say that 23 % of the 11–15 year old girls have insufficient and 25 % have problematic eating habits.

Balanced diet is very important for the development of children and young people. They normally do not consider the health aspects of nourishment. Apart from the satisfaction of their needs other factors play important roles: fast food is fun, eating and drinking depend on contemporary trends. In addition to this the proportion of overweight children in the lower classes is clearly higher than in the upper classes. These differences indicate different eating habits in various social strata. Apart from the irregular eating habits the lack of exercise has a negative influence on the BMI (Body Mass Index) and consequently on the health of young people.

Extensive educational and information activities as well programmes aimed at providing knowledge about prevention of bad nutritional habits have shown that knowing more about healthy nourishment does not really lead to more sensible eating habits with young people. For there is still a big discrepancy between what young people like to eat on the one hand and modern recommendations for healthy food on the other. The most popular school lunch usually still includes a sausage sandwich and lemonade, the healthiest however should consist of coarse wholemeal bread, milk and fruit.

This indicates clearly that the strategies we have adopted so far, such as comprehensive information and the attempts to make a healthy school lunch more attractive in regard to being enjoyed and having a favourable image, - these efforts have only had modest results.

If we realize that - how can the school together with the parents proceed in an innovative way in order to improve the health of young people through a change of nutritional habits? School is not only a place where knowledge is provided but it also has considerable influence on the health of pupils and teachers. Experience with the concept of "Health Promoting Schools" shows that lasting improvements can be achieved if education at schools and health projects are based on the principles of health promotion:

- Organising schools as a health promoting environment: Make those participate who are affected in the process of change (setting approach)
- Promote the individual competences and abilities of the pupils to lead healthy lives (empowerment)
- Establish a network of the school with partners in the region
- Develop health measures that take into consideration physical, psychological and social aspects
- Encourage the communication and cooperation between teachers, parents and pupils.

On the basis of the most recent scientific data on the nutritional situation of young people, this talk is going to discuss the basis of health education in schools and its importance on a lasting improvement in the health habits of young people. A school project "Design your snack" demonstrates what the ideas of pupils on the topic of lunch box are like and that the lunch box under certain conditions can contribute towards healthy nutritional habits.

**SCHOOL FOOD POLICY: LINKING WITH
THE NETHERLANDS HEALTHY SCHOOLS
ACTION PROGRAMME**

Mr Goof BUIJS

School food policy: linking with the Netherlands healthy schools action programme

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ABSTRACT

When you think of youth, you think of schools. Schools are a suitable setting to reach young people with health promotion. This is preferably done through an integral approach, which implies more than just teaching health education in the classroom. In the Dutch action programme on health promoting schools 2002 the school has been placed in the central position. There is a growing interest in Health Promoting Schools on national and regional level. The current developments in the Netherlands will be described.

In one of the regional pilot projects the Co-ordinated School Health Programme Model has been introduced. This model offers an evidence-based tool for developing effective and comprehensive school health programmes. Nutrition is one of the key issues in school health promotion. An example of a comprehensive school food policy will be presented based on the new school health programme model. It is recommended to develop future school food programmes in this manner.

Quality care is top priority in schools, and therefore the school's core business. The possibilities for linking school health with pupil's care are being described. In all of the European countries there is a major interest for the issue of overweight. Prevention of overweight among young people requires an innovative and effective approach. This offers interesting opportunities to use the current political interest for developing and implementing school food policy programmes and further promote health promotion in schools.

SPEECH

Introduction

There are many good reasons to pay attention to the health and the promotion of a healthy lifestyle for young people in Europe. With this we mean risk behaviours such as drinking of alcohol, smoking, unhealthy eating, lack of physical activity. Taking risks when you are young is part of the process of growing up. Young people need to learn to get these risks within acceptable boundaries and also how to keep these boundaries acceptable. Disease prevention and health promotion are an important tool in this learning process.

When you think of youth, you think of schools. Schools are a suitable setting to reach young people with health promotion. This is preferably done through an integral approach, which implies more than just teaching health education in the classroom. Recently in the Netherlands the Coordinated School Health Programme Model is being introduced.

In the national action programme on health promoting schools the school itself has been given the central position. What are the needs and demands from a school in the area of health, and how can we organise support to help schools? Too many projects have been presented to the school, which they have not asked for. Collaboration on local, regional and national level is crucial.

Nutrition is one of the key issues in school health promotion. In my presentation I will describe the current developments in the Netherlands in the area of health promoting schools. A new policy paper on prevention puts health promoting schools in a central place.

In my presentation I will demonstrate how healthy eating can be linked with the demand-oriented approach. There is a growing political interest in the issue of overweight. This offers sudden new opportunities for school food policy as one of the key issues to prevent overweight among school children. European collaboration in this area, which has been demonstrated over the past decade by the development of the spiral curriculum of nutrition education, can provide stimulating and new thinking in this area.

Dutch Action Programme

Health promotion in schools is fragmented and hardly ever addresses the needs of a specific school and its pupils and staff. In 2002 the Netherlands action programme on promoting health in schools has been presented. The programme consists of a coherent vision on the future development of health promoting schools in the Netherlands. The three main goals of the programme are:

1. to improve collaboration between organisations on local, regional and national level:

- exchange of initiatives, instruments and experiences
- developing new initiatives
- linking with youth policy
- on the political and working agendas.

2. to improve information and transfer of knowledge

- marketing the health promoting school concept
- setting a national support centre
- run a website on health promoting schools
- masterclass health promoting schools.

3. to improve the quality of interventions for health promoting schools:

- basic curriculum on health education 4-16 years
- research on effectiveness of interventions
- standardisation of questionnaires, protocols, etc.

The collaboration between the health and the education sector has been given priority in this programme.

Growing impact

Ever since the action programme was launched, there is a still growing impact of and shared interest in the issue of health promoting schools. I will mention four important developments:

1. In Autumn 2003 the Dutch Government will publish the national policy paper on Prevention. In this document investment in the health of young people has been given a priority. Schools have been identified as the most important setting for reaching young people. The policy paper offers new opportunities for getting health promoting schools on the political agenda
2. The thirty large cities in the Netherlands are developing the large-city policy for the period 2005-2009; for the first time a paragraph on health will be included, mainly on reducing inequalities in health. In this policy paper health promoting schools has been made one of its spearheads. Municipalities are becoming more and more aware of their role in promoting the health of their citizens
3. Supervised by the Ministry of Health eight national institutes are working together on a joint working plan 2004 health promoting schools. These institutes work mostly on a single health issue (such as nutrition, smoking and safety) and are funded by the Ministry. This collaboration is in line with the national action programme on health promoting schools and can be regarded as a unique step forward in a more coordinated approach
4. Local authorities are responsible for their own health policy, the 40 regional services carry out this policy. They play a key role in supporting schools in the area of health. A number of regional innovative projects help to set the agenda for health promoting schools nationally. One example is the School Beat Project (www.schoolslag.nl) in Maastricht Region: an innovative regional approach to health promotion and preventative care in schools. School Beat aims to reduce risk behaviour in youth (4-19 years) over a ten-year period. There is a focus on responding to needs and demands of individual schools and their communities.

I would like to refer to the Egmond Agenda¹, that was adopted at the European Conference on Health Promoting Schools: Education and Health in Partnership in the Netherlands September 2002. This agenda provides a helpful tool for developing a national strategy where health and education can actually meet and work together.

¹ Source: Conference Report Education & Health in Partnership: a European Conference linking education with the promotion of health in schools, IPC, 2002

The co-ordinated school health programme model

For a better understanding of school health promotion the American Co-ordinated School Health Programme Model (CSHP-model) has been introduced, first in the regional Schoolbeat project and next in the national action programme. The model is currently being tailored to the Dutch situation.

The CSHP model consists of eight components:

1. health education
2. school nutrition services
3. physical education (sports and exercise)
4. school health services
5. school counselling, psychological and social services
6. healthy school environment
7. workplace health promotion for school staff
8. family and community involvement.

Each of these components supports empowerment, involvement of pupils and parents, improvement in school's health culture and incorporation of health promotion in the existing pupil care structure. The advantage of this comprehensive approach is that it enables schools to build upon existing health activities and projects. It offers a systematic way of developing school health activities in a way that has been proven the most effective and promising.

Quality care in schools

Most schools in general are not very interested in investing in health promotion, because they see it as extra work on a already overloaded agenda. Schools do not ask for more work, they ask for support to their needs. Health promotion has to make clear what the added value is to the core business of a school. I would like to refer to the experience in the United Kingdom with the Healthy Schools Scheme has demonstrated its impact on school improvement.

It is essential to get a good and complete view on the needs and wishes of schools in the area of health. In the Netherlands a number of instruments have been developed and are now being implemented in Schoolbeat and other pilot projects. Each of the instruments help to clarify the demands from a school and to set priorities on dealing with health issues as a basis for a school plan.

A recent key for promoting health in schools is the linking with the pupil's care in schools. Schools currently experience many difficulties in acquiring adequate care for students with 'problems'. To ensure successful tailor-made school health promotion a chain-care approach is being constructed for linking school health promotion with individual pupil care. Top priority in schools nowadays is quality care: for us this offers the opportunity to introduce health promotion!

Linking with school food policy

One of the components of the Co-ordinated School Health Programme is the provision of school nutrition services. I will give you an example of how to link the issue of nutrition with each of the eight components of the CSHP Model.

1. *health education in the classroom*

Comprehensive nutrition programme based on the spiral curriculum for nutrition education from 4-16 years. Focusing on nutrition as a healthy lifestyle issue. Development of programmes that work should be given priority.

2. *school nutrition services*

Offering a varied, affordable and healthy selection of meals, snacks and drinks. Creating an environment that enhances healthy eating behaviour. Pupils have better learning results when they are eating healthy.

3. *physical education (sports and exercise)*

Promoting a physical active life. Physical education is meant to acquire the necessary skills and to improve physical fitness. It also helps enhancing mental, social and emotional skills. And it is one of the main determinants to prevent overweight.

4. *school health services*

Focusing on adequate monitoring, guidance and reference of pupils with problems in the area of nutrition. This can be both overweight and underweight, lack of healthy diet, etc.

5. *school counselling, psychological and social services*

Guidance and support focusing on the cognitive, emotional, behavioural and social needs of pupils and its social environment. Its goal is to prevent problems and to stimulate a healthy mental development.

6. *healthy school environment*

A safe, clean and well-maintained school with a positive psychosocial climate creates an environment that helps learning achievements of pupils and increases self esteem among teachers and school staff. Providing clear rules about eating and drinking on the school premises.

7. *workplace health promotion for school staff*

Providing healthy food for school staff contributes to a healthy working environment. Including in workplace health promotion.

8. *family and community involvement*

Nutrition programmes need to extend to the parents and families in order to have more impact. Also the community needs to be involved, for example by developing rules for shops that sell snacks and sweets within the vicinity of the school. Or by designing a nutrition project that includes the parents and the community.

The most effective approach for school nutrition is including each of the eight components in a comprehensive programme. This can be elaborated into a school plan that fits the particular needs and demands from a school. The final aim of this strategy is to implement healthy nutrition in the overall school policy.

What does this approach mean for the professional?

A lot of patience, good timing and communication skills are required to make these plans work. One of main challenges is a fundamental change in the perspective of the health promotion professional. Traditionally the health promotion worker and nutrition specialist have defined the nutrition problem, not the school itself. The expert explains -based on epidemiological and solid data- that things are going wrong with healthy food habits of pupils. So we make an appeal to the interest of the school and ask them to take action. Now you can ask yourself: who is the owner of the problem?

Instead of the classical top-down approach where the expert decides what is important for a school, schools themselves are now invited to set their priorities. The best thing a professional can do is to support the school in clarifying their needs and to help them to get the best support they need. For the individual school doctor or school nurse, for local and national health promotion workers -in other words people like you and me- this will be the major challenge for the coming years. We will need to focus more on processes than on contents, which requires a change in professional attitude.

The first and easiest step is by getting in direct contact with the most important setting for reaching young people: the school. There is increasing proof that this strategy will prove to have the most benefit in the end. That it will make learning and working in health promoting schools more fun. There are no problems, just possibilities.

Conclusion and recommendation

At the beginning of the new century the development of health promoting schools is in a crucial stage. This is true for the Netherlands and for Europe. We only begin to realise that a health promoting school actually benefits school improvement.

For us health promotion professionals and nutrition specialists the development of a comprehensive school food policy with a central position for the individual needs of a schools is central. On the European level this development can be supported by meetings like these. And by developing joint projects where the effectiveness of these comprehensive school food programmes can be demonstrated, both in terms of improving the health status of children and in terms of school improvement.

The big political issue concerning the health of young people in most or all of our countries is the prevention of overweight. Politicians have placed this high on their agendas. For us this offers the opportunity to develop our plans for a better school food policy. Prevention of overweight requires new thinking, including nutrition and physical activity as two important life style issues. There is a great urgency to act, so let us offer our programmes and shared thinking in this process.

**PROMOTING GOOD PERSONAL HEALTH CARE AND HEALTHY
CONSUMPTION HABITS THROUGH A GOOD SCHOOL
CLIMATE**

Mr Jean-Claude VUILLE

Promoting good personal health care and healthy consumption habits through a good school climate

By **Mr Jean-Claude VUILLE, M.D.**
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ABSTRACT

In view of a dramatic increase of the incidence of nutrition-related diseases, there is general agreement on the necessity of an active promotion of better nutrition habits. As is the case with many other lifestyle issues, the school is called upon to promote healthy nutrition, since the school is the only setting where the whole young population can be exposed to nutrition education programmes. However, the evidence of the effectiveness of nutrition education in school is scanty.

The paper presents data derived from a longitudinal evaluation of "Health Teams at School", a general health promoting intervention in primary and secondary schools of the City of Bern. All but two of the public schools in the city participated in the project (n = 18), which extended over a period of five years (1997 to 2002). Process evaluation was mainly based on repeated interviews with principals and health coordinators (specially trained members of the teaching staff), whereas teacher and student (6th and 8th grade) questionnaires were used to collect data on outcome. The teacher questionnaires also contained questions on their health education practice.

As an outcome measure, the variable "problematic eating behaviour" was derived from five questions in the student questionnaires: not eating breakfast regularly, not eating anything between breakfast and lunch, being aware of a problem with nutrition (eating too much, eating too little, behaviour suggesting bulimia, eating too much unhealthy and not enough healthy food), dieting for overweight, and preferring not to eat anything if this were possible. The evaluation of the effectiveness of health promotion activities was based on the observation that schools differed widely with respect to the following variables:

- Experience of nutrition information in class reported by students;
- Teacher reports on nutritional education given to their classes;
- Providing healthy snacks and/or day-school with lunch;
- A standardised measure of the school climate derived from the student questionnaire.

Results

The proportion of problematic eating behaviour decreased between 1998 and 2002 from 20% to 15% in 6th grade, and from 29% to 25% in 8th grade. Available data do

not provide any explanation for this unexpected phenomenon. Analyses of relationships between school factors and problematic eating behaviour were performed at the individual, the class, and the school levels.

- Individual level: Children and adolescents, who felt comfortable at school, had significantly less eating problems. Reported experience of having received nutrition information in school was not consistently related to personal eating problems.
- Class level: In those classes of 8th grade, where more than 70% of pupils reported to have had lectures on nutrition, the proportion of eating problems was lower than in other classes.
- School level: None of the specific nutrition education activities of schools (day school with lunch, provision of healthy snacks, and a high proportion of teachers doing nutrition education) was statistically related to the proportion of students with problematic eating behaviour. However, in schools with a good general climate, the proportion of such problems was lower than in schools with a poor climate.

Conclusions

Statistically significant correlations are no proof of causal relationships, and non-significant correlations in a sample of $n = 18$ schools do not prove the absence of an effect. However, the observation that values of psychosocial determinants linked to eating behaviour were more positive in schools with a good climate suggests that efforts to create an unspecific healthy atmosphere may be more promising in the promotion of healthy food habits than specific nutrition interventions. Schools with a good climate also had lower consumption rates of tobacco, alcohol, and cannabis, and a higher proportion of students taking care of their own health.

**HEALTH AND EDUCATION INTERSECTORIAL ROLE OF
SCHOOL NUTRITION AND NUTRITION EDUCATION**

**Dr Irena SIMCIC
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Health and education intersectorial role of school nutrition and nutrition education

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Key words

Organised nutrition, educational institutions, national legislation, subsidised meals, school kitchens, catering manager, nutrition education in schools

The Republic of Slovenia, although a country in transition, faces the same nutritional health problems as developed countries. The survey of the dietary habits of Slovenes (Koch 1997) shows that we overconsume foods with high content of fats (>44% E), that the share of carbohydrates is below the recommended levels (<40%), and that we under consume cereals, fruit and vegetables. The causes for this unsatisfactory situation in the field of nutrition are the same as elsewhere in Europe – changing lifestyles, diet and dietary habits, sedentary work, small physical activity what all result in high incidence and prevalence of diet related chronic diseases in adult age.

Therefore healthy life style and nutrition education have a start in early childhood in a family or in an environment where the child spends most of his daily time. And what is, beside a family, more appropriate than an educational environment?

Organised nutrition in educational institutions - kindergartens and primary/elementary schools has a long tradition in Slovenia

The reasons for organised school nutrition have changed over the years: in the 1970's and 1980's the aims of organised nutrition were directed towards improving the nutritional status of children and correction from nutritional deficiencies which originated in family nutrition. Today organised nutrition for children and youth represents an effective tool for the promotion and protection of health, improvement of bad dietary habits, nutritional education and also a help to the family where the number of family daily meals, due to our life style, is decreasing rapidly. Slovenia is a country with a high rate of full time employed women – 46,2 % of employed active population are women.

At the national level school nutrition in Slovenia is well supported by legal acts, policies, guidelines and recommendations in both education and health sector:

- Framework Act on Education (1996) requires that every school must provide at least one school meal every day
- Important priorities of The National Programme of Health Care of Slovenia (2000) in the field of health promotion and reducing the risk of nutrition related chronic diseases, are the promotion of healthy diet, physical activity and nutrition education among young people
- Two formal bodies for the intersectoral collaboration of health and education have been set up in Slovenia: Council for Food and Nutrition (working group for preschool and school nutrition) within the Ministry of Health and Programme Committee for Health within the Ministry of Education. Both bodies carry out among other things, programme activities relating to the organisation of school nutrition and nutrition education curricula for primary schools. Both activities represent a vital part of the new Slovene Food and Nutrition Action Plan (in the final phase of preparation), co-ordinated by the Ministry of Health
- In the health sector many guidelines for the nutritional quality of school meals, safety and hygienic standards already exist and some of them are under review for the adaptation to new findings and other requirements.

In Slovenia, school building standards require that every school has kitchen facilities such as:

- Own kitchen, preparing meals only for its own needs
- Central kitchen preparing meals for its own needs and other dislocated units (other schools, kindergartens, secondary schools)
- Distributing/satellite kitchen, distributing prepared meals from central kitchen.

Organisation of one school meal – morning meal/snack at the national level is part of the so called NATIONAL PROGRAMME, for which partial subsidizing is provided by the Ministry of Education. Schoolchildren just pay for the price of foodstuffs composing the meal. Other meals such as lunch or breakfast are placed into the so-called economic, but non-profit programme. The whole price for the meal is paid by the schoolchildren. In primary schools approximately 97 % of school children receive a morning meal/snack, 48 % lunch and 7 % breakfast. In kindergartens every child receives 3 daily meals (breakfast, lunch, afternoon snack). Only 20 % of secondary schools prepare and offer one meal to the pupils.

Organisation of school nutrition requires qualified and experienced staff:

- A qualified cook is required if the school prepares at least 400 meals a day
- A catering manager is required if the school prepare 4200 meals a day.

If the number of meals/snacks is bigger or smaller there is a justified suitable part for a certain working place.

The catering manager organises all the meals in school. He or she must be of course an expert with the qualification of being a teacher of Home Economics or Food Technology engineer. The basic tasks of the catering manager are:

- Planning the meals which satisfy nutritional needs of pupils
- Organisation and surveillance of the working process in the school kitchen
- Taking care of cultural behaviour during the meals (appropriate dining rooms, hygienic system etc.)
- Having contacts with parents, teachers and medical staff in cases of special nutritional needs (prescribed medical diets for children – diabetes, coeliakia, food allergies)
- Training of kitchen staff in the field of nutrition, food safety and hygiene,

In most schools a person who is catering manager also teaches the subject Home economics. The subject Home economics is a regular/obligatory subject in Slovene primary schools and is taught from 5th – 9th class. Nutrition themes and education take the main part of teaching hours within this subject. In lower classes (1 – 4) nutrition is a cross curricular subject.

Future activities

As Slovenia is a country which already has very good organisation and access to school nutrition, the main priority is to preserve this standard. In the draft of the Food and Nutrition Action Plan of Slovenia, co-ordinated by Ministry of Health, some priorities in the field of nutrition in schools relate to

- the updating of present nutrition guidelines for prepared meals
- preparation of new food based dietary standards for school meals
- nutrition surveillance
- review of nutrition curricula and
- permanent education and training of all teaching staff for healthy eating and physical activity.

The same priorities shall be addressed to secondary/middle schools – the goal is to assure the same standard of organised nutrition to our school population 15 – 18 years as exists in primary schools.

**WE DECIDE WHAT WE EAT: ACTIVE INVOLVEMENT
OF STUDENTS IN DEVELOPING SCHOOL MEAL POLICIES**

Mr Bjarne BRUUN JENSEN

We decide what we eat: active involvement of students in developing school meal policies

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ABSTRACT

The presentation addresses students' active involvement in health education and promotion with a special focus on the area of nutrition in schools.

First, the concept of pupils' participation, which has become a buzzword in education and also in health promoting schools, is critically examined and models for the further discussion and development of the concept are presented. It is argued that we need to distinguish between different forms of participation in health education and promotion. Furthermore, participation might focus on a number of different questions in health education and therefore it makes no sense to describe a project as participatory or the opposite. A matrix is suggested as a tool that can be used to analyse and systematise discussions about young people involvement and participation.

Second, the 'knowledge-component' in health and education is analysed. It is argued that knowledge is still important to focus on but that knowledge has to be thought carefully through from the overall aim of health – and nutrition - education and promotion. A model, illustrating different landscapes and dimensions of knowledge in relation to nutrition, are provided for further discussion.

Finally, the notion of 'nutrition' in a health promoting school is examined. It is argued that the broader WHO-definition of health implies that we need to identify new concepts in the field of "eating, food, meals and culture" in health education and promotion. A model illustrating these new dimensions – in which 'nutrition' is only one – is presented for discussion.

SPEECH

Introduction

The title of my presentation deals with the involvement of young people in educational processes and therefore I will begin with discussing two pressing general questions in the area of health education. Both are relevant in relation to the overall aim of health education and promotion and therefore also for schools' work with nutrition: the development of pupils' abilities to influence their own life and their ability to influence their living conditions – their 'action competence'.

The first question to be discussed concerns the widespread notion that target groups should be directly involved in the processes of health educational. This trend may be clearly seen in relation to teaching in schools: The Danish national curriculum guide for schools health education in the folkeskole, for example, states that the ideal starting point is that the "...pupils should be involved in all decisions concerning the content of teaching" (Danish Ministry of Education, 1995a, p. 34). The same trend may be observed, moreover, within the many private and public health organisations, and the many criticisms that have been made about the moralising and didactic approach to health (and environmental) questions in education (Jensen, 1997). In the light of the incredible popularity enjoyed at the moment by the "involvement idea" there is an increasing need to launch a more differentiated discussion of what this term actually covers.

The second question concerns what kinds of knowledge or insights about health schools should help pupils acquire during health education. For example, are we talking about knowledge about what kinds of behaviour carry the greatest risk of later illness and an early death or knowledge about the extent to which some environmental or economic conditions influence health and the quality of life? Or is it perhaps the case that knowledge in the field of health education and promotion is not really that important, and that the central matter is to strengthen the self-confidence and commitment of the pupils and to contribute to the clarification of their values, and suchlike?

This article argues that the role and content of knowledge must be subjected to critical analysis, and must be related closely to the aims of health education. Moreover, if these aims are not formulated carefully enough, then an attempt must be made to do this if the discussion about knowledge is to be moved forwards. In connection with the discussion of both of these questions, models and systematic approaches will be set up that can help to structure the discussion of the educational aspects of these themes.

There are many sides to participation.

Most contemporary projects within health education aim explicitly – in some way or another – in involving the 'target group' as active agents. This current trend is the surface manifestation of a number of different theoretical justifications, and at the same time, poses a variety of new challenges to teaching in these topics.

Justifications

A number of reasons for the very strong desire to involve target groups may be given. The ones most commonly presented are linked to reflections concerning the effects of certain activities on the 'target group'. If they are not drawn actively into the process, it is felt that there will be little chance that they will come to feel a sense of 'ownership' of the project or area of enquiry. And if they do not feel this sense of ownership, there is very little likelihood that the activities will leave permanent traces in the form of changes in practice, behaviour or action in relation to the 'target group' in question. The considerable contemporary interest within the educational theory in constructivist learning theories has contributed to an increased interest in this question.

To these justifications can be added the potential benefits to democracy and liberal education that such involvement-oriented approaches may facilitate. For example, the overall aims of the primary and lower secondary school in Denmark state that: "The school shall prepare the pupils for active participation, joint responsibility, rights and duties in a society based on freedom and democracy. The teaching of the school and its daily life must *therefore* build on intellectual freedom, equality and democracy" (Danish Ministry of Education, 1995b). In a school system governed by this liberal aim of education for democracy, such outcomes of teaching – for example in the areas of health education – must naturally be regarded as worthwhile.

To this should be added ethical considerations concerning the obligation to involve participants in processes that are centrally related to their own lives. Such considerations, which are also related to the liberal education task facing schools, may also be seen to be active within many organisations, for example, those of a humanitarian nature.

This desire to involve the participants, who may be due to these various causes and motives, is evident both in educational theory and educational practice. For example, all the school co-ordinators at an evaluation seminar within the Danish Network of Health Promoting Schools agreed to the statement that if one does not succeed in involving pupils from the start, one might as well forget all about developing their action competence and empowerment (Jensen 1998). In this case, the motivation was mostly related to effectiveness, and influenced to a large extent by experiences indicating that pupils' participation is the most decisive precondition for arousing and developing their involvement, and for the knowledge gained by the pupils to be applicable at all. Thus, on the basis of this experience, action competence and empowerment are abilities to be actively acquired, and not just skills to be simply 'passed on' by someone, and passively received.

However, this project – and the concluding evaluation seminar – also revealed that there is a tendency to conceive of, and refer to, pupils' influence and pupil involvement on a very vague and general level, and that these terms often have diverse and ambiguous meanings. Phrases such as 'starting with the pupils', 'linked to the pupils', 'co-determination', 'influence', 'user involvement', 'co-influence', 'co-responsibility', 'participation' and 'involvement' are often used more or less haphazardly, without careful definition, in discussions.

For these reasons the example of 'The Health Promoting School' project points to the need to qualify the concept of participation itself as a precondition for further discussion and development. These tendencies are not only found within schools, but also in the broader debate about education in our society.

Involvement – different forms!

First we can talk about different forms of participation. Pupils' participation is often equated with 'pupil determination', that is, the idea that the 'target group' should formulate its visions more or less unaided, work out a plan of action and set about 'changing the world'. In this connection it has to be said that as far as schools are

concerned not many of these projects succeed. Instead, many experiences with the involvement of pupils indicate that it is really necessary for the teacher to involve herself in the process and the dialogue as a responsible, though respectful, partner. When trying to develop their visions and attitudes, pupils need a 'sparring partner' who can challenge them and with whom they can try out their views.

The environmental psychologist, Roger A. Hart, is well known for his books on 'Children's Participation' (Hart, 1992, 1997). He has developed what he calls a 'ladder of participation' to unravel and elucidate the concept of pupil participation, as he has found that it is improperly used in many contexts – both inside and outside the world of schools and education. Hart argues that a number of activities often designated 'pupil involvement' have nothing whatsoever to do with involvement: *"Regrettably, while children's and youths' participation does occur in different degrees around the world, it is often exploitative or frivolous"* (Hart, 1992, p. 4).

On the other hand, Hart's basic premise about what young people can achieve is optimistic: *"... young people can design and manage complex projects together if they feel some sense of ownership in them. If young people do not at least partially design the goals of the projects themselves, they are unlikely to demonstrate the great competence they possess."* (Hart, 1992, p. 5). The challenge facing the adult (i.e., the teacher) therefore is to create space in which the pupils can demonstrate this competence.

Hart's ladder contains eight steps, each representing an increasing degree of pupil participation. At the lowest step on this ladder, for example, he questions the use of young people on panels at conferences, where they often appear without really knowing why, while the highest step is called 'Child-initiated, shared decisions with adults'. Hart calls the three lowest steps on the ladder 'non-participation', and emphasises that many more projects are at these levels than at the higher steps of 'genuine participation'.

Participation matrix

The levels depicted in Figure 1 represent a simplification – and partly also a critique – of the steps on Hart's ladder, and are here related to more general health educational contexts. Taken together, the rows (or steps on the ladder) represent different levels of co-determination or involvement. The ladder has been crossed with a number of columns illustrating questions or areas of decision, which could be included in a teaching activity.

| | In the project | Selecting the theme | Investigation | Vision/ Goals | Actions | Evaluation/ Follow up |
|---|----------------|---------------------|---------------|---------------|---------|-----------------------|
| Pupils' suggestions Common decisions | | | | | | |
| Pupils' suggestions Pupils' decisions | | | | | | |
| Teachers' suggestion Common decisions | | | | | | |
| Teachers inform Pupils accept | | | | | | |
| Teachers' decisions told clearly to pupils | | | | | | |

Figure 1. Participation matrix. Operationalising the concept of participation

The bottom level of Figure 2 (non-participation) has been included to make it quite clear that in some cases, for one reason or another, participation is not possible.

There follow four levels of co-determination which, although the boundaries between them may be fluid, represent different ideal types. The first refers to a situation in which the teacher puts forward a proposal that is accepted by the students without much discussion. One may of course quite reasonably ask whether this has anything to do with involvement. The next three levels are distinguished from each other by a combination of (1) who puts up an idea or proposal for discussion, and (2) who actually takes the final decision. These three levels have been important in the school context, as there is sometimes the implicit presumption that any principle of involving pupils excludes almost per se the teacher presenting a proposal as the basis for discussion.

The important point to focus on here, though, is the subsequent dialogue and discussion, which must be carried out with – and with respect for – the 'target group' (determining the content and premises of a 'respectful' dialogues of this kind would call for another article, and will not be treated further at this point).

The top level of the matrix is inspired by Hart, who places 'Child-initiated, shared decisions with adults' at the top of his ladder, even higher than 'Child-initiated and directed'. In the school context, this priority stresses how necessary it is for the teacher to appear as a responsible adult with her own opinions when involved in projects built around pupil participation. The more the pupils themselves are involved, the more important, presumably, it will be for the teacher to be visible and to play an active role in the discussions. Hart concludes his essay in the following way (Hart, 1992, p. 44):

"Productive collaboration between young and old should be the core of any democratic society wishing to improve itself, while providing continuity between the past, present, and the future."

When using this model in connection with health education, different weightings may be given to the three highest levels in terms of priority and quality, and this will, moreover, probably vary from project to project as well as from teacher to teacher. The aim of Figure 1, therefore, is to systematise the discussion of participation in relation to a particular health education project rather than to indicate a ranking order as such. Consequently, the three upper levels should be described as different *forms* rather than different *levels* of participation.

Furthermore, an actual project will involve a particular way of reacting to the questions that appear along the horizontal axis. The number and type of themes presented will naturally vary from project to project, and it is therefore important to note that, in any given project, there will be different types of participation in relation to different areas of decision. In other words, the aim is not to establish an ideal model for health education activities, according to which involvement is to be interpreted and applied in specific ways. On the contrary, it is important to insist that the partners who are working together (which also includes the 'target group') should spend some time discussing *how* and *in relation to which questions and decisions* they will include the involvement aspect. Figure 1 might be able to help in this respect.

In other words, the matrix questions if it is possible to view and describe a project as such as participatory or not. And it also questions the "ladder metaphor" with respect to the three categories (rows) where the focus is on mutual discussion and dialogue. Instead of ranking the different forms of participation as "steps", the matrix reflects the assumption that participation – as well as its educational value – is context bound. And the context might consist of a number of factors (the character of the project, the personality of the teacher, the "preparedness" among the students, which other stakeholders there are involved etc.).

In conclusion, the crucial element is not who originally gets the idea to do something but rather the dialogue which follows and makes it possible for different stakeholders to take ownership.

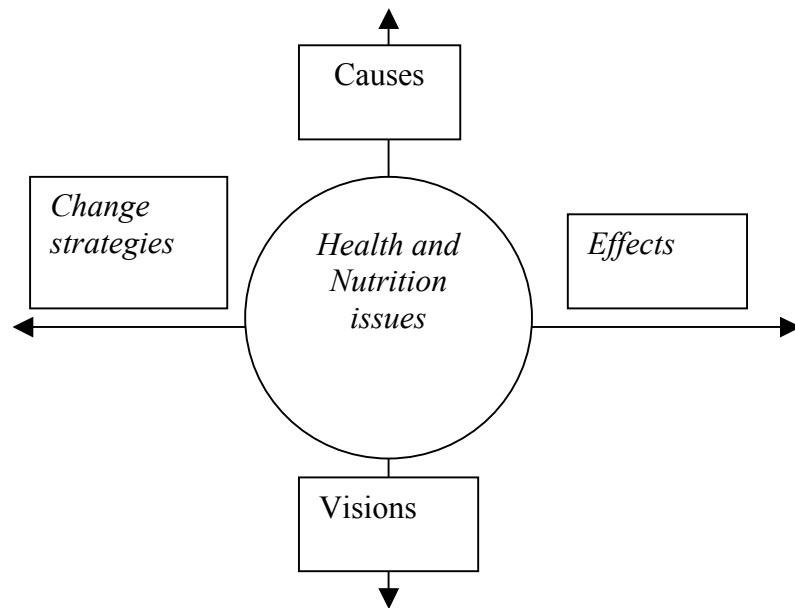
Four dimensions of action-oriented knowledge

According to the resolution from the first international Health Promoting Schools Conference the overall aim of the work of the school is that pupils develop skills and competencies that enable them to act in relation to their own lives and the conditions in their environment. In this connection, the resolution states that the overall aim is the development of the pupils' "Empowerment and action competence", and it is further stated that "...*The Health Promoting School improves young people's abilities to take action and generate change*". In other words, action and change are central concepts here.

Working with students as active participants in health education and promotion does not make health 'content' superfluous. Instead, it has to be re-thought from an action-perspective. This point of departure has great consequences for the kind of knowledge that will be the focus of planning, implementing and evaluating the teaching and learning.

Four different aspects of action-oriented knowledge can be illustrated using the model in Figure 2. The four dimensions illustrate different perspectives on the types of knowledge through which a given health topic such as nutrition can be viewed and analysed.

Figure 2. Four dimensions of action-oriented knowledge



1st dimension: What kind of problem is it? - Knowledge about effects

The first dimension deals with knowledge about the existence and spread of health problems. This type of knowledge can, for example, be about the consequences of a given behaviour (such as too much fat in our diet). This knowledge is important, as it is the kind that awakens our concern and attention, and creates the starting point for a willing to act. So this type of knowledge can be one of the prerequisites for developing action competence. However, this form of knowledge is mainly of a scientific nature and, on its own, risks contributing to developing concern and action paralysis among students as it gives no explanation for why we have these problems, let alone how we can contribute to solving them

2nd dimension: Why do we have the problems we have? - Knowledge about root causes

The next aspect deals with the 'cause' dimension of our health problems. Such causes include the associated social, cultural and economic factors behind our behaviour, and might include questions such as the effect of advertisements on our eating behaviour, the price of healthy food versus "junk food", the availability of healthy food in the school canteen etc. This knowledge belongs mainly in the sociological, cultural and economic areas. Explanations about the increasing inequalities in health are to be found within this area.

3rd dimension: How do we change things? - Knowledge about change strategies

This dimension deals with both knowledge about how to control one's own life and how to contribute to changing living conditions in society. How do we change surrounding structures, for example in a school, in a community or in our family? Who do we turn to, and who could we ally ourselves with? This type of knowledge also includes knowing how to encourage co-operation, how to analyse power relations, and so on. It is often to be found within psychological, political and sociological studies, and is central to an action-oriented health education and promotion activity. How do students go about if they want to establish a canteen at the school and how are young people able to influence the "eating pattern" in the family (e.g. if they want more time together with their parents when they have dinner etc.).

4th dimension: Where do we want to go? - Knowledge about alternatives and visions

The fourth dimension deals with the necessity of developing one's own visions. Seeing real possibilities for forming and developing one's dreams and ideas for the future in relation to one's own life, work, family and society, and having the support and surplus energy to realise them, is an important pre-requisite to the motivation and ability to act and change.

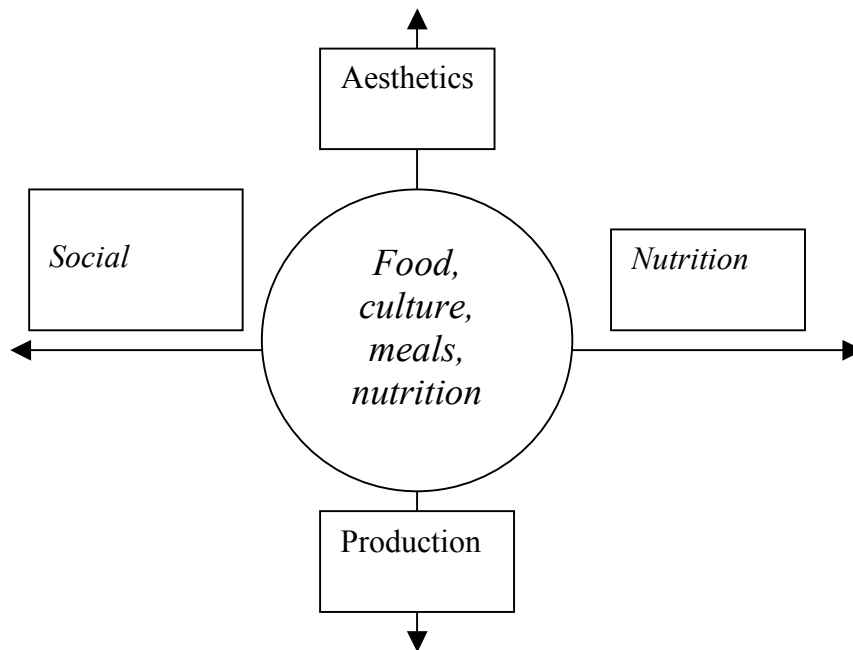
The four dimensions in Figure 2 show that traditional health information would be placed along the first dimension axis: the one which is concerned with knowledge of effects of health conditions. The scientific approach is dominant in this type of information and the focus is on students attaining knowledge about the serious health problems that might affect them, how quickly such problems are evolving, what behaviour that leads to risks of illness and so on.

This type of knowledge is not necessarily action promoting, especially when it stands alone. Indeed such knowledge can create a great sense of worry and, if this type of knowledge is not followed up by knowledge about causes and strategies for change, then it can be associated with breaking down commitment and contributing to action paralysis. We need to insist on including causal analyses and ways of producing change within health education.

Therefore knowledge based aspects should be thoroughly thought through in the light of an action- and change perspective. A participatory and action-oriented health and nutrition education is not without basic knowledge and insight: on the contrary, it demands that a new 'landscape' of extensive and coherent knowledge and insight is being developed. This creates important demands and challenges for future teachers, who should be both in a position to fulfil the consultant role and, furthermore, from her own experience and talent be able to perceive today's health conditions from an inter-subject and action-oriented point of view.

The notion of 'nutrition' in a health promoting school

Finally, a few comments will be made about the issue of nutrition in health education. Many schools from the Danish network of health promoting schools have emphasised the broad WHO-definition of health in their projects. This definition implies that health is about more than absence of disease; it is also about life quality and wellbeing – mental and social. From projects dealing with nutrition and food the model in figure 3 has been developed:



The figure illustrates the concept students and teachers have worked with in the area of eating habits/food/nutrition. The area is much broader than the traditional and scientific-oriented "nutrition" concept. Nutrition is viewed only as one dimension of food quality. Another dimension is dealing with aesthetics (how does the food taste, how does it smell, how does it look like etc.). This dimension is considered as very important by students and teachers while working with an approach which is based on and inspired by the WHO-definition of health. The third dimension is about the social environment. How do we "organise" our meals – at home, in schools, with friends etc.? And finally, a fourth dimension is dealing with the conditions under which our food is produced. It includes considerations about animal welfare in the industrial farming industry, pollution of the environment, the quality of the worksite environment for the employers etc.

This broader approach – as well as the model itself - has been developed by teachers and students who have been participating actively in "nutrition" projects at health promoting school. At the same time the model is currently also used by teachers as a framework for involving students in discussion and debates about good food quality.

This approach is also mirrored in the "Young Minds" project where young people are using IT to collaborate on health issues across cultural borders (www.young-minds.net). In the "Young Minds" project leading up to a big health promoting school conference in 2002, students from four countries collaborated on the issue of nutrition. Within this collaboration it was obvious that the young people viewed health and nutrition in the light of the more positive WHO-definition. For instance, one of classes developed an "alternative nutrition pyramid" where the two most important "layers" in the pyramid were "Better quality of food" and "Cheerful friendly atmosphere during meals".

From these experiences it is clear the words and concepts we use are crucial for the way health is viewed in school practice. It is also obvious that the words we often use in health education and health promotion have been developed by the natural sciences and consequently they might militate against the more open and broad notions that are central to a health promoting school approach. Instead of nutrition projects it is perhaps more recommendable to deal with projects about 'food, culture and the environment' – if we want to collaborate with young people and to involve them in the dialogue as genuine participants.

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**PARENTS AND SCHOOL,
PARTNERS IN EDUCATING FOR HEALTHY FOOD CHOICE —
UTOPIA OR REALITY?**

**Mrs Patricia MELOTTE
Mr Christophe CONTENT**

Eating at school: the school and parents as partners – utopia or reality?

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Introduction

A group of parents, interested in the issue of eating behaviour at school, organised a large-scale survey of parents and teachers. The vast majority of teaching staff and parents perceived this as a positive initiative. Presentation of the results made it possible to forge contacts with some of the school's teachers who had already attempted to introduce some innovative ideas in this field. Links were also established with parents having professional experience in the spheres of dietetics and catering for large administrative organisations, which will be extremely useful when following up the lines of action emerging from the survey.

The Clair-Vivre school

Clair-Vivre is an elementary school, which opened in 1964 at Evere in the Brussels-Capital region. Since its foundation it has constantly claimed as its own and applied the principles developed by the French pedagogue Célestin Freinet. Today the school has some 900 pupils from first-grade nursery to sixth-grade primary, spread among three separate sites: "Clair-Vivre Centre", "Germinal" and the "Complexe".

At Clair-Vivre, learning is based on children's own experience. The school's educational approach is aimed at developing happy, fulfilled, independent individuals, capable of expressing themselves, communicating, working together, showing creativity and assuming their responsibilities as members of society. In view of this pedagogic approach, the parents' association considered itself entitled to look to the school to develop responsible consumer attitudes, in particular regarding eating habits, in its pupils.

Functioning of Clair-Vivre: councils and participatory bodies

Teachers and pupils work together. The adults encourage the children to take a significant share of responsibility and to agree among themselves the rules governing their community life. The children have three vehicles for making themselves heard and organising their existence:

- the *Class Council*, which meets once a week and brings together all pupils in the same class

- the *School Council*, on which each class has a democratically elected representative
- lastly, the *Enlarged School Council*, including representatives of all partners within the school: final year pupils, management, teachers' representatives, special needs teachers, youth workers, parents, maintenance staff and a representative of the municipal council. It deals with practicalities: health matters, the premises' state of repair, school meals, equipment, improvement of living, recreational and working conditions.

As a result of Clair Vivre's pedagogic approach, the parents are more involved, albeit indirectly, in their children's learning processes. It was this door deliberately left open by the school and necessary to its pedagogic approach that gave the Environment Group the impression that it would be welcome as a purveyor of projects and objectives in line with the school's teaching philosophy.

The parents also exert an influence through two other bodies: firstly, through the *participatory board*, which brings together representatives of the education authority, teaching staff, parents and local social, cultural and business circles. This body is responsible for discussing the school's strategy, amending it and conducting periodical assessments of its implementation. Then, there is the *parents' association*, which includes various activity groups, in particular groups concerned with mobility, festive events and philosophical debate on the school's strategy, and the Environment Group, which focuses on the children's day-to-day environment. As is frequently the case, only a minority of parents take a truly active role in school life and the pedagogic approach. The vast majority lack the time or the desire to become involved, or quite simply chose to send their children to this school because it was near to home.

Emergence of the project

When the Environment Group first raised the issue of healthy eating at a meeting of the Enlarged School Council in 2002, it based its arguments on a number of observations:

- Some teachers encouraged children to bring sweets or snacks to school to celebrate a festive occasion or used these as a means of reward
- The school sold lemonade as a lunchtime drink, without this being clearly mentioned in the food and drink accounting records
- Many parents were dissatisfied with the quality and composition of hot school meals.

Having voiced its surprise at the indirect encouragement of behaviour incompatible with a responsible, healthy approach to food choices and its desire to propose solutions for improving school meals, the parents' association then asked a fundamental question: Did the school consider itself concerned and deem the subject worthy of its attention?

The reply was negative: the school's representatives thought it a matter not for the school but for the parents. The Environment Group's concerns were moreover deemed to be of marginal importance, and the school's attitude was systematically to play down the issue as a mere question of "going organic". Confronted with what resembled a "dialogue of the deaf", the group decided to legitimate its concerns and give them a factual basis by drawing up an exhaustive questionnaire to be sent to all parents and the entire teaching staff. Their aim was to persuade others of the importance of their objectives, but also to achieve representativeness, conveying the wishes of a majority of the parents. They assumed that other parents were probably asking themselves the same questions. This made it appropriate to conduct a detailed survey covering the many aspects of the issue, since the group could not disregard differing opinions or levels of satisfaction in such matters nor fail to take account of criteria such as the amount individual parents were prepared to spend on their child's school meals.

Whom to target with the questionnaire?

The group's spontaneous initial response was the parents, not the children, although they are the direct consumers and hence in a better position to give an opinion on school meals. This decision was partly due to the fact that the initiative originated with the parents' association, which made it logical to involve the parents. It was also influenced by the belief that parents still determine what their children eat and shape their eating habits, although children are also entitled to a say, especially as they grow older. Nor did the Environment Group want to tread on the teachers' toes, wishing to leave them entirely free to inculcate healthy eating precepts as they saw fit. Lastly, it was important to know whether the parents had particular expectations of the school.

We also considered it essential to consult the teaching staff, a category which we extended to youth workers, to compare their opinions with the parents' reactions on the same issues and also to obtain an insight into the real situation on the ground, since most of the teachers supervised school meals. It must be admitted that, doubtless as a result of the initial very negative reactions, the group's decision was influenced more by a desire not to offend the teachers' susceptibilities, rather than the hope of establishing a partnership. If the teachers had not participated, the results of the survey would have been perceived as an attempt to impose the parents' way of thinking. The question of consulting the children was raised again at a later stage, but the group postponed taking a decision on this subject in view of the huge workload involved in analysing the responses to the survey.

Field of study

Although the group originally intended to limit the number of questions, since it wished to impose on the parents and teachers only once, but with the fullest possible coverage, the end questionnaire contained 24 questions, some of which included subsidiary questions and multiple-entry tables. The questions were designed to sound out the following: degree of interest for the issue of healthy eating at school, opinions on the food and drink proposed by the school not just for lunch but also as snacks, the reasons underlying choices and behaviours, and hence the parent's beliefs, the

parents' wishes as to the school's role and the contributions it should make, opinions on various proposals requiring a greater physical effort or a bigger financial investment from the school or the parents. The teaching staff were in addition questioned as to how school meals functioned, their current participation in the awareness-raising effort, their interest in such matters, any measures taken in practice - where? how? by whom? at what frequency? - their requirements as to teaching materials and, lastly, their opinion of the initiative, whether negative or positive.

Wording the questions

The issue was how to word the questions and propose a choice of answers in the most objective manner possible. It was vital to avoid preconceptions and to disregard our own initial observations, so as not to bias the questionnaire.

- Why choose questions with open-ended answers in some cases, and with set answers in others? Why sometimes opt for multiple-choice answers?
- It proved difficult to word the questions so that their meaning was clear to all concerned, to use the right terms, the general acceptance of which did not necessarily correspond to their dictionary definition. One example is the difference between a balanced and a varied meal
- How should people be asked to express their degree of satisfaction?
- Was it of interest to be able to explain the parents' choices?
- Why ask a banal question, which nobody would answer in the negative, such as "Are you concerned about what your child eats at school?"?
- Why ask a question which we know will not be answered entirely truthfully, for instance opinions on the rules enforced by teachers at meal-times?
- Was it worth asking controversial questions, such as whether sugary drinks and sweets should be banned, etc.?
- Why select tangible proposals before having consulted those concerned? And on what basis?

The drafting of the questionnaire therefore represented a great deal of work for the group.

Analysis of the results

After the completed questionnaires had been collected, some lengthy initial experimentation and discussion proved necessary in view of the large quantity of replies received and our concern to analyse them as objectively as possible. 75% of the parents and the teachers responded to the survey. Another difficult task was collating the replies to the questions with open-ended answers.

Presentation of the results

In view of the mass of figures obtained, the first objective was to identify the most significant trends. This required us to exercise extreme caution, so as to avoid any bias. Why present certain results but exclude others? On what basis? With what aim? The results were presented as objectively and exhaustively as possible, without attempting to corroborate the group's ideas at all costs.

We shall not go into details of the results of the survey here. It can nonetheless be noted that their analysis showed that 90% of parents and teaching staff were concerned about the variety, balance and quality of school meals. The parents often mentioned the importance of a friendly, calm atmosphere in the school canteen. At Clair Vivre one child out of every four takes school meals. The price of a full, hot lunch is 2 euros. Three-quarters of the parents of children taking school meals said they were satisfied with the quality and variety. However, 80% of the teachers supervising school meals thought they lacked variety, appeal and balance. With regard to snacks, 99% of children brought a snack from home because their parents wanted to control what their children ate, did not trust the quality of snacks sold by the school or considered them too expensive. The parents acknowledged that they gave their children too many sweet biscuits and that they should give more preference to fresh or dried fruit and dairy products. Nearly 90% of parents and teachers thought the school should play a role in teaching good eating habits. Two-thirds of teachers already applied awareness-raising measures in the classroom. Nearly 80% of both parents and teachers wanted the school to impose restrictions on bringing certain types of food and drink to school. However, 58% of parents wanted the school to ban certain foodstuffs, whereas only 10% of teachers subscribed to such bans.

At the meeting to present the results to the parents and teachers, so as to foster an interactive exchange of views the audience was allowed to interrupt the presentation with questions at any time.

How can the figures be translated into action?

The question is rather how to move beyond the results, that is to say obtain their acceptance as such and use them as a basis for determining lines of action. How can the expectations of those who want immediate results and visible, tangible action straight away be reconciled with the views of those who first want to bring about a change of attitudes, to work behind the scenes? Is the solution to strike a balance between the two? And if so, how? With which potential partners? External partners, such as the association "Les Midis à l'Ecole", or inside partners, such as the school nurse? Account must also be taken of the problems posed by issues of authority, responsibility and competition.

The evening we spent presenting the results of the survey opened up new prospects. For instance, some parents' occupations - dietician - or experience - maintaining the "cold chain" in a hospital context - could prove very helpful during future negotiations with the school meals provider concerning amendments to the contractual conditions. A further example was one teacher's testimony about the failure of a previous experiment with bringing healthy snacks to school. Many lessons can doubtless be

learned from an analysis of the reasons for this failure. The formation of small discussion groups on themes of special interest to certain individuals was another possible line of action proposed by the Environment Group.

Seeking the children's own opinion was naturally another key component of the lines of action proposed, and the teachers agreed to take charge of the coordination aspects.

Conclusions

Parental involvement in the issue of healthy eating at school should be perceived as one example of how parents can participate in the school community's day-to-day life. The Environment Group also believes that healthy eating principles and habits are part of the vital lessons to be taught in school with a view to children's integration into society. Although the teachers welcomed the survey, it was organised entirely at the parents' initiative. The initial links forged between parents and teachers at the meeting to present the results constitute the beginnings of a dialogue on this theme, which we hope will become more intensive over the coming months.

**INTER-AGENCY CO-OPERATION REGARDING NUTRITION
IN SCHOOLS**

Dr. Michel CHAULIAC

National inter-agency co-operation regarding nutrition in schools

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ABSTRACT

As well as a biological function, food and nutrition have social and cultural dimensions. Enjoyment, the sharing of food and the forging of social bonds are all important aspects to be taken into account in any action to improve the nutritional status of the population. This is particularly true of children, who are still learning about food, mainly at school and in the family, where attempts can be made to direct the various influences to which they are subjected. As far as the authorities are concerned, they have to provide people with a framework so as to make consistent the messages, activities and involvement of the many players in the field of nutrition and food. Inter-ministry coordination - and inter-institutional co-operation as well - and the development of partnerships with the business and voluntary sectors are essential, both at the national and at the more local level, in order to disseminate throughout society, particularly in schools, all the factors which can foster consistency. Local adjustments to the general framework enable account to be taken of specific features and "standardisation" to be avoided.

It is necessary first to clarify the aims of the nutrition policy pursued by the authorities. Schools are one of the areas in which they can intervene. Once the aims are clear, activities can be designed, checked, implemented and evaluated. A major line of action is the attempt to build consistency between the meals served at school, the facts pupils are taught, eating habits in the home and the food to which children have access. The activities carried out in France under the national nutrition and health programme for 2001-2005, which has been coordinated at national and local level by bodies spanning a variety of sectors, illustrate different responses to these challenges.

SPEECH

It is recognised that, as well as a biological function, food has economic, social and cultural dimensions. Its study involves many scientific disciplines. The need for action involving many sectors in order to ensure the protection and promotion of good nutritional status is a leitmotiv found in every document on food and nutrition policies and on nutritional education, which is one of their tools.

¹ The opinions expressed in this document are the sole responsibility of the author

Schools' function is to educate, which means that they have a specific role which goes beyond the compulsory syllabus: all children can benefit from early teaching and learning in a supervised environment, under the guidance of educational specialists. Thus many people would like to make use of schools, particularly those who wish to promote greater well-being in society. One example is provided by the health sector. In the face of risks, and in a desire to prevent them, there is heavy demand for the inclusion on syllabuses of issues relating to mental health, sexuality, the dangers of tobacco and alcohol, behaviour involving risk, road safety, nutrition, etc. Nutrition is a special case, for large numbers of children spend a lot of their day at school. They have a physiological requirement to take in food during this period.

What are the questions which arise with regard to school nutrition? It is necessary to identify these issues carefully in order to determine how inter-ministry or inter-institution co-operation can help to facilitate and reinforce action. Then a look will be taken at the practical form taken by this co-operation in France, through the national nutrition and health programme.

Schools and nutrition

Children: consumers subject to influence. Childhood: a time to build up nutritional health

Advancing knowledge in the fields of epidemiology, medical sciences and human sciences underlines the important role played by nutrition as a determining factor in the main pathologies which impose the heaviest burden in terms of mortality and morbidity in Europe. As well as bringing with them individual suffering and difficulties for patients' family and social circle, such pathologies also constitute an essential component of health spending. What we are talking about is cardio-vascular diseases, cancers affecting a number of sites, obesity, type II diabetes, fractures linked to osteoporosis, etc. ... These usually occur in adults. In contrast, satisfactory nutrition and sufficient physical activity constitute a factor for health protection. In fact, it is during childhood, when eating habits are being formed, that the basis for such pathologies is created .

An ever-present incentive to consume derives from changes in eating habits and in food supply and promotion, changes which result from the distance between home and workplace, family relationships, the ever-increasing availability of foodstuffs, their increasing affordability, the ease with which foods can be preserved and tailored more and more specifically to increasingly specific population groups. People's great concern about food safety has resulted in increased surveillance by the authorities. The regulations lay down strict criteria. Checks are carried out. Warning systems have been improved. The food chain, from producer to retailer and caterer, via the processor, has seen considerable progress. Now, food safety is regarded as an absolute requirement by the population at large. Consumers penalise severely any shortcomings in respect of safety. Where food safety is concerned, there can be no competition. So enjoyment and health are becoming factors in the competition in the food business. Nowadays, children, who are particularly fond of sweet products, determine what food the family buys.

The marked increase over the last two decades in the numbers of over-weight and obese children has become a major concern of the health authorities. Paediatricians are warning about the emergence of cases of type II diabetes among children.

It is recognised that what is learnt during childhood influences the eating habits of the future adult. Children learn what is regarded as "right" in the culture in which they live, and acquire the eating habits of the society in which they were born. However, neither what is "right" nor habits are set in stone, but are continually changing. Consequently there can be no question of setting a rigid standard at national, European or world level.

Nutrition at school: aims and strategies

The importance of beginning nutritional education in childhood is very widely accepted, so schools have a significant role to play, complementing that of the family. Two factors need to be clarified: the aim and how to attain it. Leaving aside specific interests, society, through the state, has to provide the answers.

It is important to promote, both individually and collectively, conduct beneficial to health, bearing in mind the fact that the nutritional environment is bound to undergo constant change. The purpose of this general guideline is to maintain, in the long-term, a good state of nutrition, a pre-requisite of a good state of health, and to prevent the development of pathologies.

In this connection, three factors must be taken into account: the passing on of knowledge and formation of attitudes, implementation and, a fundamental factor, consistency between knowledge and practice in daily life in a given society. Moreover, there is a need to agree on what is meant by beneficial conduct.

School and the family are the two interactive environments for acquiring knowledge and learning about practice. They can direct the other influences to which children are subjected (the media and the promotional activity which percolates into the family and school environments). It is therefore essential to foster convergence and consistency between the messages and practices transmitted at school, in the family and beyond that, in the social environment.

- Which knowledge? What is done to put into practice the slogan we all chorus, "a varied and balanced diet"? How can this idea be translated into action for the general public and for children? How can it be prevented from being rendered meaningless by its many interpretations and uses? How can it be adapted to suit each cultural context? How is it possible to avoid references to nutrition taking on medical and guilt-inducing moral overtones which obscure the pleasurable and gastronomic aspects of food and its role in building social links and identity? How can we reduce the "cacophony of food information" to which people are subjected in numerous messages (from health professionals, the mass media, food advertising and "gurus")? Children are heavily exposed to such interference.

In a field in which individual and collective statements about food and its associations are as much about magic or beliefs as they are about science, this is a complex exercise. In 2000, French people, when questioned for a major food survey, made it clear that the messages were so contradictory that they did not trust anyone.

- What practice should be adopted? How should eating habits consistent with the messages and knowledge communicated be promoted? At school, which is a controlled environment, this is not always done. School food systems are extremely varied in Europe and reflect the specific history of each country. Only specific answers can be given. As well as that of consistency within each school, another question which arises is that of consistency between practice at the school and practices within and outside the family. While there has occasionally been evidence of a bottom-up educational process, the question arises as to whether the school alone can influence practice at home.

Consequently, in order to promote eating habits beneficial to health, it is necessary to clarify and make consistent the objectives set with regard to nutrition by the departments responsible for education, for food, especially school food, and for school health, but also for public health and nutrition.

Nutrition at school: the French approach under the national nutrition and health programme

The organisation of school food

The school meals service

Each country has its own specific institutional system. In France, it is general practice for a full, hot lunch to be served in schools from kindergarten to upper secondary school. Parents can order meals if they wish for their children (aged 2-3 to 10-12) from the primary school canteen, managed by the municipality. In secondary education, the provision of meals is a responsibility of the national education system, whereas the local or regional authorities are responsible for the premises – the departments, in the case of lower secondary, and the regions for upper secondary schools. The preparation of meals may be contracted out to a company.

Electorally, this service constitutes a major issue. The quality of the meals served at school is the subject of frequent discussions between parents and children, amongst parents and between elected representatives and citizens. Menu committees are set up comprising councillors and parents' and schools' representatives, to discuss meal quality and other problems raised by school canteens. In 1998 during a general election campaign at a time when unemployment was at record levels, a study showed that there had been a decrease in the numbers of lower secondary pupils in underprivileged areas eating in school canteens. Each political party made proposals to remedy the situation. Likewise, the wide-ranging debate resulting from the "mad cow disease" crisis led those responsible for school canteens to ban beef on a temporary basis, under parental pressure. Beef did not reappear for a long time,

returning when experts had given the go-ahead, and when guarantees of product origin could be both given and checked.

Other food provision in schools

At primary school, and especially in kindergartens, some municipalities may organise a snack outside school hours for children who have to await a parent's arrival after the end of the school day. Very often, at teachers' initiative, a snack is organised during the morning at kindergartens; this happens less frequently in primary schools. Parents are asked to bring food to be shared out. Under pressure from the children, and in view of the storage conditions, biscuits or sweet products predominate. In addition, some schools may qualify for free deliveries of milk.

Individual secondary schools often decide to install machines from which drinks and sweet or savoury products may be obtained. These belong to outside companies, and part of the profit is used at the school's own discretion, often being administered by a pupils' association.

Nutrition on the syllabus

Nutrition is not a separate subject on school syllabuses. Some aspects of nutrition are covered at various ages, from kindergarten to the end of secondary education. These come under various subjects: biology, science and environmental studies, economics and social sciences essentially, but they are also taken into account in physical education and sport. Food is also a subject which spans different subjects and may be explored within the various teaching procedures which have been more recently implemented by the national education system: artistic and cultural projects, fact-finding excursions and supervised practical work.

The monitoring of pupils' health

School medicine comes under the national Education Ministry. Systematic examinations of pupils are scheduled throughout their school life, with a view to monitoring growth, in particular. The data collected are analysed on an aggregate local or regional, or even national, basis, although not yet to a sufficient degree.

Inter-sectoral work in the context of a national programme

In 2000, in the light of advances in scientific knowledge about the relationship between nutrition and health, as well as the country's epidemiological nutritional data and people's desire for consistency in the messages they receive about nutrition, the French Prime Minister asked the Health Minister to draw up and coordinate a national nutrition and health programme, in conjunction with other ministries.

That political request from the Prime Minister enabled the national nutrition and health programme (PNNS) to be drawn up, under the aegis of the Health Minister, with the Ministers for Agriculture, Education, Youth and Sport, Research, Consumer Affairs and the Interior. The programme, drawn up for the period 2001-2005, sets specific

quantified objectives and directs a range of activities on the basis of several strategies. Together, they are intended to enable the general objective of "improving the health of the population as a whole by way of action on nutrition¹" to be achieved. In this overall vision where the aim set concerns the population at large, and where nutrition is seen as a determining factor in health, the school environment is a vector, a fundamental, but not the only, vector, of a policy which enables the overall consistency hitherto yet to be achieved. One of the aims is to associate the many players with a food-related role. Families, children, teachers, health professionals and the food chain from production to distribution and catering are all involved. The setting up of the programme's strategic committee, chaired by the Health Minister, illustrates that desire for the programme to be coordinated inter-institutionally (see Appendix 1). Going beyond even the involvement of several ministries, practical effect has been given to the participation and involvement of other players indispensable to the achievement of the objectives. These include, for example, not only the local and regional authorities, which, as has been seen, are responsible for school meals, but also food manufacturers and consumers. Moreover, and a few concrete examples of this will be provided, the strategic committee sets up specific working groups to make proposals, some of them relating more specifically to the school environment. A national policy can be carried out only with the strong involvement of local players. The necessary organisation is planned and is being put into place.

These co-ordination procedures have made possible a number of achievements.

Tangible achievements

School meals

In June 2001, the Minister of Education published a circular promised in the context of the PNNS. That circular² "on the composition of meals served in school canteens and food safety" was jointly signed by 8 Ministers and State Secretaries³. It was addressed to all managers in the national education system involved in the taking of decisions relating to school meals. Only such a wide-ranging consultation between ministries could enable every structure to be reached, in view of the diversity of actors involved in school meals. The circular is a result of collaboration between ministries and with nutrition experts and professionals, particularly in the field of catering, and parents of school children. It also benefited from the work carried out earlier by the National Food Council.

It sets out the major changes necessary in terms of the nutritional composition of the meals served: fewer fats and more iron, calcium and fibres, fruit and vegetables. It also points to the benefits of bread. It gives a variety of pointers, relating both to the environment in which children eat their meals and the time which should be allowed

¹ Available in French on www.sante.gouv.fr; click on "nutrition" in "accès simplifié par thème" for access to both the French and the English version

² Available at www.education.gouv.fr/bo/2001/special

³ Education, Economic Affairs and Finance, Agriculture, Labour and Solidarity, Interior, Health, Vocational Education and Consumer Affairs

for them to do so. It also emphasises the educational dimension of school meals, in terms of both the discovery of tastes and nutritional education, and stresses the pleasurable aspect of food. It gives very practical and precise information with a view to achieving variety over sequences of 20 meals, together with indications of portion size, depending on the child's age (see details in Appendix 2). It warns against the addition of salt and advocates water rather than sugary drinks. The circular provides details of snacks in order to limit their potential adverse impact in terms of children over-eating (complementary work is under way on this specific point). It lists and clarifies the rules designed to guarantee food safety and traceability.

The associations of the collective catering trade have rapidly passed this circular around, in order to encourage all managers to put it into practice. A variety of tools to facilitate supply management in the light of these directives have been produced by specialist companies.

The actual impact of the circular on the quality of the meals served has not yet been completely evaluated. It is certain that it is a major factor for future policy. There is always a lag between publication of a circular, its adoption by potential users and its implementation nationwide. Only monitoring instruments can provide objective data. A regional evaluation project, supported by the Ministry of Health, is under way. The Ministry of Education plans to carry out a full evaluation in 2004.

Catering for children who suffer from food allergies

An interministerial circular¹ signed by 5 Ministers² and published in September 2003 reinforces and supplements earlier instruments designed in particular to enable children suffering from food allergies to benefit from the school meals service, and more generally from any meals which children take together. To this end, a document (the individually-tailored plan, known as the PAI) is drawn up jointly by the head of the school, the school doctor - in liaison with the family doctor - the parents and, ideally, the manager of the school canteen. This text suggests different approaches to preventing the exclusion of the child from meals taken together at school. In particular, it lays down conditions enabling the child to bring in a packed lunch.

In France there was a total of 7 482 PAIs for food allergies in 2002, ie an average of one PAI for every 1 538 children. More than 71% of PAIs are for children in primary schools and kindergartens.

Nutrition and school lessons

Under the auspices of the PNNS strategic committee, a working group held meetings over a one-year period in order to make proposals for the integration of the nutritional dimension into school lessons. The group included not only representatives of the

¹ Available at www.education.gouv.fr/bo/2003/34

² Interior, Internal Security and Local Freedoms; Youth, Education and Research; Health, the Family and Disabled Persons; Agriculture, Food, Fisheries and Rural Affairs; delegate for school education and delegate for the family.

Ministries of Health, Youth and Sport and Education, but also representatives of agencies responsible for health education and food safety, parent-teacher associations, consumer organisations and associations of teachers, school doctors, sociologists and paediatricians.

The work carried out has brought to light the weaknesses in the present situation – notably the dispersal of knowledge between different subjects and across different levels, the weak link between theoretical knowledge and what is actually served up at mealtimes and the divergence between highly processed food and its presentation as coming from small-scale farm producers. Emphasis has been placed on all the possibilities, illustrated by numerous initiatives taken at particular establishments or by local education authorities. Proposals were submitted to the ministers in the last quarter of 2003. Apart from some improvements to the areas covered by syllabuses, they also relate to the need to improve the supply of teaching tools and materials. Coupled with work on raising the awareness of players in the field of education, this would enable encouragement to be given to teachers to carry out nutrition-related activities, whether or not these are carried out in conjunction with the school meals service, but without any compulsion, in view of the already heavy burden imposed by the curriculum and the large variety of health topics. Clearly, it is necessary to check material arriving at the school to ensure that it is appropriate to the national nutrition and health programme. All too often, teachers aware of the relationship between nutrition and health try to develop this subject in class using documents of a commercial quality sometimes exceeding their scientific reliability.

Consistency of the messages which relate to nutrition

As part of the PNNS, a food guide for everyone (entitled "Eat your way to health") was published in 2002 and widely distributed to the public at large. On the basis of the objectives set by the programme, this enabled eating guidelines to be defined and made known to French people. The programme provides for the guide to be tailored to suit specific target groups, particularly children and adolescents. Work on the document for children started in the last quarter of 2002, following the same procedure used for the guide for the general public. The procedure provides for very wide consultations involving scientific experts, health practitioners and educationalists, civil servants and citizens. The work involves meetings of a working group under the aegis of the French Food Safety Agency, validation of the content of the initial text by that agency's Committee of Experts on Human Nutrition, observations from a specialised public health committee, validation by the PNNS strategic committee, observations from the National Food Council, editing by experts in drafting and a pre-launch test involving the target group. Once the document has been published, there will be an advertising campaign, and it will be put on sale. It will subsequently be distributed free of charge through a number of different networks. Publication is scheduled for September 2004. On the basis of the initial work, the decision has been taken to write a guide for parents of children from birth to 18 years of age, and to publish a version specifically for adolescents. The national education and health education networks will be important vehicles for disseminating these publications. As in the case of the guide

for the general public, it is planned to issue a version targeted specifically at health professionals. Depending on the amount of resources available, a specific document for teachers could also be produced.

Monitoring children's growth

Another example of this co-operation is the design, publication and distribution of tools designed to assist with the monitoring of individuals' state of nutrition. Body-mass index is a valuable indicator for diagnosing and monitoring nutritional status, particularly the risks of excessive body weight and obesity. It can also help to predict changes in children's nutritional status. Disks have been prepared by specialists. Booklets have been written to help doctors to interpret and channel their discussions with their patients. The children's disks have been widely distributed to health professionals, particularly paediatricians and school doctors, so that a wide range of children can be diagnosed and then, if need be, guided at an early stage from the school medical service towards health service treatment.

The local level and the multisectoral approach

The programme was launched in early 2001. The working method adopted, the broad approach to nutrition outside the confines of the health-care sector (as regards both the membership of the strategic committee and the procedure used to draw up specific tools or recommendations) is appropriate to French people's increasing concern about food and nutrition matters. Institutionally, the efforts are taken further through the setting up of active multi-sectoral committees at regional level. Growing awareness of the increasing prevalence of excessive body weight and obesity in children has led to an emphasis being placed on that age range, and hence on schools. This is clearly illustrated by the many initiatives which are being taken by local players. This is why we see many projects emerging in which close partnerships are created involving the education, health care, health education and agriculture sectors and the food business. Such projects usually receive funding from the health sector, including the health insurance scheme, and from local/regional authorities, and they may involve industry.

Experiments are being conducted to introduce fruit vending machines in secondary schools, which could, in the long run, replace vending machines dispensing sweet and savoury products which ought not to be eaten to excess. In many establishments, specific efforts have been made to encourage children to discover new tastes and to appreciate fruit and vegetables as part of their school meals, thanks to supporting efforts by teachers and active participation by school cooks. In some primary schools, the free distribution of fruit is intended to lead to an increase in fruit consumption both at school and in the family. In other schools, teaching tools have been developed with the support of health professionals and women's organisations with the intention of engaging children's critical faculties in the face of food advertising on television. An effort is also made to involve families in this process. In other places, networks for the prevention of obesity in children and adolescents are being tried out. A close link is provided between school doctors, local practitioners, hospitals and outside players, such as leisure centres and sports clubs.

Conclusion

Action in favour of nutrition goes beyond the strict sphere covered by education and health. The coordination of the PNSS, which the Prime Minister entrusted to the Health Minister, gives the authorities concerned the possibility of working together to achieve specific, quantified and measurable targets.

Within the bodies and the working groups created under the PNNS, which include representatives of ministries, business, NGOs and scientists, the possible synergies between the spheres of activity of each are investigated and steered by the objectives of the national policy. Channels of communication are organised at the regional level, enabling changes to be made to suit specific contexts. Thus efforts are directed towards maintaining overall consistency in the aim of the activities and the messages conveyed to the population as a whole (adults and children). It is essential that the gap between the knowledge imparted at school and eating habits, both at school and at home, is reduced to the minimum. This will help to establish eating habits that are entrenched in the national and regional culture, and capable of coping with the various constraints encountered in daily life and the rapid development of the products on offer, which are the subject of major advertising drives. The challenge is obviously a huge one. Practical advances have begun. As well as activities carried out at national level, we are witnessing a burgeoning of local initiatives carried out through partnership. Schools often play a key role. Evaluation is an important tool for carrying forward inter-sectoral discussion so as better to shape the action to be taken. It is still necessary to clarify the interrelationships between nutrition and food policies, in order to reinforce measures designed to guide the supply of food in a direction beneficial to the health of school children and their families.

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APPENDIX 1

MEMBERSHIP OF THE STRATEGIC COMMITTEE OF THE PNNS – THE NATIONAL NUTRITION AND HEALTH PROGRAMME:

Ex officio members:

- The Minister for the Interior or his representative;
- The Minister for Education or his representative;
The Minister for Agriculture and Fisheries or his representative;
- The Minister for Youth and Sport or his representative;
- The Minister for Research or his representative;
- The State Secretary for Small and Medium-sized Enterprises, Trade, Craft Industries and Consumer Affairs or his representative;
- The Director-General of the French Food Safety Agency or his representative;
- The Director of the Institute for Health Monitoring or his representative;
- The Director-General of the National Institute for Health and Medical Research or his representative;
- The Director-General of the National Institute for Agricultural Research or his representative;
- The President of the National Food Council or his representative;
- The Director of the National Health Insurance Fund for Employed Workers or his representative;
- The President of the *Fédération nationale de la mutualité française* or his representative;
- The delegate general of the French Committee for Health Education;
- The President of the *Assemblée des départements de France* or his representative;
- The President of the Association of Mayors of France or his representative.

Members appointed by order of the Minister for Health:

- One representative of the National Association of Food Industries;
- Two representatives of consumers;
- Three qualified persons.

APPENDIX 2

EXTRACT FROM THE CIRCULAR ON THE COMPOSITION OF FOODS SERVED IN SCHOOL CANTEENS AND FOOD SAFETY

In order to help those responsible for catering to comply with nutritional recommendations, the appendix to the circular provides indications as to the servicing frequency of the foodstuffs listed in the GPEMDA (for instance, the frequency of the inclusion of chips or other fried foods with a high fat content on the menu is limited, whereas the inclusion of cheeses and dairy products with a high calcium content is encouraged).

The circular specifies that menus must be drawn up so as to suit children's tastes as far as is possible, in order to ensure that meals are actually eaten.

Foodstuff serving frequency (GPEMDA)

FREQUENCY CHECK LIST

| Period from ... to ... (at least 20 meals) | Starter | Protein-based dish | Vegetable | Dairy product | Dessert | Frequency observed | Recommended frequency |
|---|---------|--------------------|-----------|---------------|---------|--------------------|-----------------------------|
| Starters $\geq 15\%$ fat | | | | | | /20 | 8/20 maximum |
| Products for frying and pre-fried products $\geq 15\%$ fat | | | | | | /20 | 6/20 maximum |
| Fresh or dried pastries $\geq 15\%$ fat | | | | | | /20 | 4/20 maximum |
| Protein-based dishes with protein:lipid ratio ≤ 1 ⁽¹⁾ | | | | | | /20 | 2/20 maximum |
| Raw vegetables or fruit | | | | | | /20 | 15/20 minimum |
| Individual or mixed vegetables other than dried (50% minimum) | | | | | | /20 | 10/20 |
| Dried vegetables, starchy foods or cereals | | | | | | /20 | 10/20 |
| Dishes based on fish $\geq 70\%$ fish and protein:lipid ratio ≥ 2 ⁽²⁾ | | | | | | /20 | 4/20 minimum |
| Red meat | | | | | | /20 | 4/20 minimum ⁽³⁾ |
| Dishes based on meat or reconstituted fish $< 70\%$ raw material of animal origin | | | | | | /20 | 4/20 maximum |
| Cheeses or other dairy products ≥ 150 mg calcium ⁽⁴⁾ | | | | | | /20 | 10/20 minimum |
| Cheeses or other dairy products < 150 mg calcium and ≥ 100 mg calcium ⁽⁵⁾ | | | | | | /20 | 8/20 minimum |

Weights of portions of dairy products currently used in collective catering:

Yoghurt: 125 g

Fromage frais: 100 g

Cream desserts, baked custard, baked-custard-style jellied milk, other jellied milk desserts: 80 to 125 g

Mousses: 50 g

Matured cheeses: 30 g

Processed cheeses: 20 g

| CALCIUM PER PORTION | TYPES OF DAIRY PRODUCT |
|--|---|
| Calcium > 300 mg per portion | Emmental and cooked pressed cheeses of the Comté type |
| Calcium < 300 and > 200 mg per portion | Blue Saint-Paulin and other pressed cheeses of the Cantal type Pressed cheese specialities |
| Calcium < 200 and > 150 mg per portion | Plain yoghurt Fruit yoghurt Roquefort cheese Saint-Nectaire cheese Raclette cheese Creamy desserts |
| Calcium < 150 and > 100 mg per portion | Camembert and soft cheeses with a mixed rind (Brie, Carré...) Tomme cheese Fromage frais Munster cheese Processed cheese Fruit yoghurt Flavoured yoghurt Cream desserts and crème caramel Rice or semolina mould Rice or semolina pudding Baked custard Fruit baked in batter (Clafoutis) Jellied milk desserts Soft cheese specialities |
| Calcium < 100 mg per portion | Fresh, dry and semi-dry goat's cheese Goat's cheese, petit suisse Processed cheese Speciality products based on fromage frais or blue cheese, mousses Rice pudding, semolina pudding, crème caramel Cream desserts Fromage frais Custard Fruit baked in batter (Clafoutis) Baked custard |

ABSTRACTS

Nº1

HEALTHY EATING AT SCHOOL – AN INTEGRATED NUTRITION EDUCATION PROJECT IN A PORTUGUESE JUNIOR SCHOOL

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Introduction

Recognising the principle that healthy alimentary practices are part of global individual health, the work focuses on the role of school in health and nutrition education emphasising its undeniable potential.

Methods of approach

The program was conceived as a whole school approach to nutrition education with a theoretical basis on social learning theory. The target group was a school community (831 students / parents, 85 teachers, and 10 staff members of the food sector).

The effectiveness of the intervention was determined using a pre- and post-test design using the retrospective 24 hours recall and food frequency; it was applied before and after a one-year intervention to 215 students (two classrooms of each level, from 5th to 9th grade). Opinion questionnaires before and after the program development were also applied.

The intervention included a cross-disciplinary classroom curriculum, and regular additional activities involving the school environment, including training of students, teachers, staff, and parents.

Results

An improvement in the quality of meals made by students was detectable after the intervention, with differences according to the development level and sex.

Taste and food availability were set as determining factors influencing food consumption.

Discussion

A holistic approach of nutrition education is recommended which should involve all educational process agents and be developed over a larger period, from the primary school upwards.

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Nº2

THE IMPACT OF A NUTRITION EDUCATION PROGRAM

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Key words: food habits, education, acquisition, change, knowledge, practice, and program

Abstract

Introduction

This project was developed with the aim of increasing knowledge and of improving eating practices of school children enrolled in two basic schools.

Methods of approach

The sample included 102 children, aged 9-13 yrs. Children's food habits were assessed with two 24h-recall, one before the intervention and the other 1,5 months after its end. Knowledge acquisition was assessed with a questionnaire, in which children were asked to name healthy foods and to give their definition of healthy food habits. The program was designed in order to reach the school community. Several educational materials were developed. The children were involved in 9 nutrition education sessions. To measure changes in FH meals were classified according to their quality and a food quality index was developed.

Results

The results showed an increase in the number of meals per day (Q1: 5 meals/day: 45,1%; Q2: 6 meals/day: 58,8%) and also in the food quality index (Q1: 2,1; Q2: 2,8). Knowledge acquisition was also observed as the number of students answering increased and also the contents of the answers improved. Discussion: The objective of this program was to promote healthier eating practices as well as knowledge improvement. These results reveal that these two broad objectives were achieved with a simple but effective program.

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Nº3

INTERACTIVE CD-ROM: DISCOVER HEALTHY EATING

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Discover healthy eating is an interactive CD-ROM for schoolchildren, aged 11–14 years old. This educational material was developed by the *Faculty of Nutrition and Food Sciences* from the University of Porto in collaboration with the *Consumer Institute* and financed by *Health Programme XXI*.

The objectives of the CD-ROM are to facilitate the transmission of information and to improve knowledge and understanding in the area of food and nutrition sciences; to stimulate coordinated work among students, teachers and family and to help youngsters to adopt healthy eating behaviours and to practise physical activity regularly.

The design and graphics of the CD are centred around a fridge which displays on the door several magnets, each one corresponding to a different section: an interactive video, games, knowledge tests, library and a competition.

The interactive video represents one day in the life of a young boy during which he goes to school, plays, eats and does some household tasks. The player can interact by making different food choices which will affect the boy's activities.

The games, tests and library which are connected with food and nutrition are intended to bring together learning and fun.

Finally, the national competition entitled "The Dish of My Region" involves the filling in of one questionnaire by a student and then a culinary preparation of his/her region taking into account healthy nutrition, sustainability, environmental and cultural aspects.

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N°4

MEASURES TO IMPROVE NUTRITION IN SCHOOLS IN WALES

Authors

S Bowker Welsh Assembly Government
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Introduction

The Welsh Assembly Government and Food Standards Agency Wales (FSA) are working together with local partners to support a range of initiatives designed to influence nutrition and improve the food and drink available in schools.

Methods

- The Welsh Network of Healthy School Schemes (WNHSS) provides a national framework for local schemes. 599 schools are currently participating. Many choose to address nutrition.

- Assembly guidance has been issued on:
 - Nutritional standards for school lunches which underpins legislation
 - The need for a whole school approach
 - The place of food in the school curriculum.

- The Heartbeat Award for Schools rewards those offering a co-ordinated approach to food safety, nutrition teaching and healthy options.

- The Assembly/FSA's nutrition strategy, 'Food and Well Being', lists children and young people as a priority group.

Results

Locally, healthy school schemes and individual schools have worked on nutrition issues; e.g.

Introducing healthy packed lunches as a school meal option;

Healthy drink vending;

327 fruit tuck shops in WNHSS schools.

Nationally, free milk is available, and water coolers and free breakfasts are being introduced to schools in disadvantaged areas.

Discussion

National guidance and support is encouraging action at a local level.

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N°5

DEVELOPING SUSTAINABLE STRATEGIES TO PROMOTE HEALTHY EATING ACROSS THE SCHOOL DAY IN ENGLAND

Author

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Introduction

The **Food in Schools (FiS) Programme** is a joint Department of Health (DH) and Department for Education and Skills (DfES) venture to help address concerns around children's diets in England.

Methods of approach

The DH led strand comprises eight projects which follow the child through the school day:

- Healthier breakfast clubs
- Healthier tuck shops
- Healthier vending machines
- Water provision
- Dining room environment
- Healthier lunch boxes
- Cookery clubs
- Growing clubs.

Building on previous work and best practice, each project will focus on how best to embed such interventions into schools to gain maximum benefit, overcome barriers, address sustainability and funding/resource issues and ease of implementation. Evaluation and communication are key overarching components. Projects run over the 2003/04 school year, with final reports due end October 2004.

Results or outcome

The Programme aims to disseminate best practice in a 'whole school approach' to enable schools to develop sustainable in-house strategies for improving the nutrition and diet of children.

Discussion

A multifaceted dissemination strategy will be developed, as no one approach is appropriate for all schools. Partnerships are integral to the sustainability of the Programme.

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N°6

RESEARCH AIMED AT PROMOTING HEALTHIER EATING IN CHILDREN

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Introduction

The United Kingdom Food Standards Agency funds research into the major barriers consumers face to making healthier dietary choices and evaluation of interventions to help overcome these barriers.

Two evaluated school-based interventions are described.

Methods of approach

1. Bash Street Kids. Whole school approach, for one school year, to encourage increased fruit and vegetable intake in children aged 6-7 and 10-11. Fruit and vegetable intake by pupils in 2 test and 2 control schools in Scotland assessed by food diaries at baseline and post-intervention.
2. Dish it Up! interactive CD-ROM. Background research with, and active involvement of, the target age group of 11-12 year olds used to develop a motivational CD-ROM. This includes fun and challenging quizzes and games related to food choices and provides a visual assessment and feedback of the teenager's diet. It was briefly evaluated after use in lessons in a number of UK schools.

Results

1. Small but significantly higher average consumption of 0.5 portions of fruit per child per day in intervention, compared with control, schools. Teacher support material featuring the Bash Street cartoon characters is being adapted for the Food Standards Agency web site.
2. Significant improvement in pupils' knowledge, but no change in attitude or behaviour as a result of short exposure to the CD-ROM. The Agency has provided 3 free copies of the CD to every secondary school in the UK.

Discussion

1. Demonstrates effectiveness of an integrated approach. Difficulties with a dietary assessment tool for the age group. Difficult to get parents involved. Heavy dependence on researcher input may limit sustainability.
2. The evaluation approach during development and implementation will be described. The Food Standards Agency is planning a further evaluation of the CD-ROM in late 2003.

References

Food Acceptability and Choice Research and Development programme and further reports of completed and on-going projects

<http://www.food.gov.uk/science/research/NutritionResearch/n09programme/?version=1>

Development and evaluation of a novel, school-based intervention to increase the fruit and vegetable intake in primary school children. Full report available from the Food Standards Agency Library or summary on

<http://www.food.gov.uk/science/research/NutritionResearch/n09programme/n09projectlist/n09003/>

Development and evaluation of an interactive, multi-media CD-ROM for the promotion of nutrition education in secondary school children. Full report available from the Food Standards Agency Library or summary on

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N° 7

A TRAINING RESOURCE - GROWING THROUGH ADOLESCENCE: A HEALTH PROMOTING SCHOOL APPROACH TO HEALTHY EATING

Authors

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Introduction

Healthy eating choices at school require the support of school staff who understand the complex issues relating to young people's eating choices both in school and in their wider lives. This training pack, which is in the final stages of production and testing, has been developed to provide current research findings on healthy eating. It also explores the related psychosocial issues which can affect healthy eating. The resource is targeted at trainers who will be able to work with teachers and school health co-ordinators in the upper primary and low secondary school. The pack includes nine background chapters in three sections. The titles of the chapters indicate the wide scope of the resource, these are:-

- Growing & Changing - Food for Growth, Physical Activity, Adjusting to Puberty.
- Food & Young People - Food Patterns and Preferences, Overweight and Obesity, Dieting and Eating Disorders.
- Image and Reality - Self-esteem, Body Image, the Role of the Media.

The pack will include a set of eight fact sheets for the teachers and offer guidance on how to train teachers in relation to the issues identified in the chapters.

The resource provides five training sessions that cover the above issues. These acknowledge the importance of starting with the learner's own agenda. (Wetton and McCoy, 1998). The resource also gives trainers a menu of activities to use in training which are linked to the background chapters.

Outcome

On completion of the development phase and testing, Health Scotland will produce a training manual in 2004 that will be made freely available to other countries to use and adapt as appropriate.

Discussion

Other initiatives in Scotland showed that young people have relatively good knowledge about healthy eating (Young, 1993) and that wider factors influence food choices. A case study approach to health promoting schools through healthy eating (Inchley, Currie & Young, 2000) also identified that there are many issues that impact on the choices young people make about food. This new resource attempts to address these issues to support associated initiatives on the provision of healthy food in schools.

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N°8

FOOD CAN ONLY PROVIDE ENERGY WHEN EATEN; INTAKE OF SCHOOL LUNCHES

Authors

Public health administrator Mette Kjörstad, Central kitchen manager Kent Lund, the Municipality of Tyresö.

Main objective

Identify variations between schools and strengths/weaknesses in school-lunch system, such as: composition of total meals, time schedule for serving, influence of dining room logistics and number of people in dining room on intake and waste, influence of adult attendance on intake and waste, participation in school lunches in different age groups of students, menu preferences in different age groups.

Context

Swedish schools must provide lunches for students. Tyresö has 15 schools, 7000 pupils aged 6-19. The main course is prepared in one central kitchen, varying salads and side-courses in the different school kitchens.

Target groups

Local politicians and other decision-makers responsible for school lunches.

Methods of approach

Tyresö's 15 schools have a total of 17 dining rooms. 16 dining rooms took part in the study, covering students from 6-19 years of age. The 16 dining rooms were split in two groups of eight, and each group had a two-week period for the study, providing a database of 20 days consumption.

The pupils were divided into 3 age groups: 6-12 years, 13-16 years and 17-19 years. During the two weeks, all food served in the dining rooms (salads, main and side courses and other (left over) courses) was weighed before being served. Bread, drink and special food such as diet, vegetarian or religious was not weighed. Leftover food was weighed on return to the kitchen, as well as all scrap waste from plates. A nutritionist calculated the recommended weight of the 20 meals, suitable for intake by a pupil of about 10-13 years of age.

A financial estimation of an average price for the main course was made so as to be able to estimate the cost of waste and surplus production from the central kitchen. The number of students whom the central kitchen, the schools, and the central administration included when invoicing, was collected and compared. The number of students and adults for whom food was ordered was noted. The number of people who came to eat was calculated by counting the plates used (including the plates used by those who had special food). Time-schedules for when lunch was served to the students were collected, as well as information on how many people were allowed, according to safety-regulations, to be in the dining-room at the same time. Information about sales in, and opening hours of, school cafeterias during the two weeks was gathered. During (the same) six days, the kitchen staff filled in a form noting what they served as salads and side-courses to the main meal so that total meals offered in schools could be compared to national recommendations.

Key people

School-kitchen and dining room staff.

Resources

Research support from CTN (Centre for Applied Nutrition, Stockholm County Council).

Time

Planning, study, report: 6 months over one year.

Ethical considerations

A systemic approach was vital so as to avoid the risk of seeking fault in any specific actors. A system is an indivisible whole. The result of the whole (system) is a consequence of the interaction between the results of the parts – not the sum of the result of the parts! The atmosphere in the dining room, the attitudes towards school lunches and the dining room of school staff, parents and politicians, acoustics, environment, adult participation and stress, may have a greater impact on pupils' eating habits and attitudes to food than the served meal itself. The data collected in the study was in the report therefore not only related to the menu, but also to the above mentioned, and other, factors.

The schools received their own results concerning average intake and waste (in weight and financial estimations) and attendance compared to the average of other schools with students of the same age and the average of all schools. This was only for their internal quality evaluation, and was not put in the final report. In the report, the emphasis was on the need for healthy eating as means of being able to learn, and in all graphics and diagrams the schools were presented either without names or grouped according to the age of students, except in the case of the Gymnasium because there is only one such school in Tyresö..

Even though financial estimations were made, and were important to make, the emphasis was that there is no money to be saved, but that money could be spent in a more efficient way by being relocated from scrap waste and surplus to food eaten.

Results of study

The average amount of food taken by all age groups, all meals, (in kilogram) per person, was not sufficient, compared to the recommendations made by the nutritionist for students aged 10-13.

The amount of scrap waste per person increased with the age of the students, from 5% to 18%.

Attendance decreased with the age of the students, from 95% to 60%.

There was a total daily surplus production ordered from the central kitchen of ca. 20%.

Adult attendance in the dining room decreased with the age of the students.

The crowded dining rooms had the most scrap waste, 17-18% of taken food.

A financial estimation of scrap waste per person in the different age groups (ranging from 0,19kr to 1.60kr.) was made.

Only two dining rooms served salads in accordance with the national nutritional guidelines.

4 out of 6 school cafeterias were open during the lunch period.

Outcome

A political decision was taken to promote implementation of national guidelines for school lunches, which include, amongst many things, offering a second main course, as well as a variety of salads and side courses, lunch to be served after 11 o'clock and at the same time every day for classes.

Increased co-operation between actors involved:

- Between personnel and school department on developing clear criteria for job descriptions and mandate for kitchen and dining room staff, validation based education for kitchen and dining room staff in the national guidelines for school lunches, hygiene, computer skills etc.
- Between those responsible for the buildings and the school department: a long-term plan made for refurbishing of kitchens and two kitchens now being refurbished
- Between central kitchen and schools: a new invoice system developed
- Between students and schools: "Food boards" are created.

Local political decision to:

- Implement national guidelines for school lunches in all schools
- Train kitchen staff
- Refurbish dining rooms and kitchens.

Discussion

Despite variations in data quality, the over-all results gave clear indications of systemic strengths and weaknesses. The weakness in data quality was due to some forms not being filled out as expected by kitchen staff, and to the fact that it was not possible to find out exactly what of all the food offered the students had taken. Since only the weight of the food taken was noted, they could have taken only jam, or sauce, for all we know, but most often the scrap waste consists of potatoes, rice etc whilst the meat/fish is eaten up.

The systemic approach implied looking at:

- 1) the dining room environment and intake/waste
- 2) the administrative routines for invoicing
- 3) the kitchen- and dining room staffs' rate of sick leave, their level of education as cooks, their computer skills and access to computers, their mandate in decision-making concerning purchasing and ordering foodstuffs
- 4) the kitchen equipment for preparing and storing food had been evaluated in all schools by an external consultant in a separate study, together with financial estimations of costs for refurbishing the kitchens. This study was added as an appendix to the report.

Recommendation

Build on the common goal, interest and responsibility of all actors (kitchen and dining room staff, school administrators, politicians, parents, students, personnel department, real estate department) in the system: *Promotion of healthy eating* as opposed to their being audited and evaluated. Link research findings from other studies to the local hard data, such as the comparison between how much should be eaten and how much was eaten; what should be served and what was served, safety regulations and number of people in dining room etc. .

Make financial estimations of waste and surplus, thereby creating a strong incentive for change.

References

- Guidelines for school lunches - National Food Administration and CTN, Centre for Applied Nutrition, Stockholm County Council

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Nº9

"DIME COMO COMES": A JOINT INITIATIVE BETWEEN THE CATERING SECTOR AND PUBLIC HEALTH NUTRITION

Authors

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Introduction

The objective of this paper is to analyse the contribution of school meals to food patterns of school-aged population and to evaluate the perceived quality of the service.

Methods

Descriptive cross-sectional study carried out on a random population sample (3-16 yr) having school meals in Spain. The study protocol included socio-economical data, food consumption and dietary habits in the school and out of the school. Information was collected by means of two questionnaires: one completed by children at school and a second one completed by the family at home.

Results

Response rate was 96,1% for children (n=322) and 63,3% for families (n=212). Lunch was a full meal for 90% of children. 70% of children perceived the portion served as adequate size. However, 55% of boys and 40% of girls aged 12-16 years reported eating only half the serving. Main reasons were dislike for taste (50%) and inadequate temperature (10%). In the school menu vegetables and fish were offered less frequently than other food groups. 45% had a mid-morning snack and 81% an after-school snack. The overall food consumption pattern showed inadequate intake of fruits and vegetables and fair for the dairy group.

Discussion

Results from this study provide interesting data on school meals in Spain. Catering companies supplying the service could contribute to increase the offer of fruit and vegetables in schools, including a choice for a mid-morning and/or after-school snack particularly for children under 12 years.

*** This survey had the logistic support of Sodexho Spain**

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N°10

MONITORING PROGRAM OF SCHOOL MEALS IN THE MUNICIPALITY OF BILBAO

Authors

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Introduction

The objective of this paper is to describe the design and to analyse key findings of the "Monitoring program of school meals in Bilbao".

Methods

Started in 1984, this programme is co-ordinated by the Community Nutrition Unit and implemented in collaboration with the School Health and Food Safety Programs. Collects information on key indicators; provides advise to caterers and school food service personnel and develops information materials for families and schools. Annual surveillance on a random sample of children considers food intake in the school (double weight food record of school meal) and out of school (24 hour recall) along perceived quality of the service. Organizational issues, management and satisfaction is collected from managers and food service staff.

Results

7.753 students (3-16 years) and 203 teachers used the service in Public Schools of Bilbao (n=45), 172 students and 6 teachers per school on average in 2001-2002. Most schools were supplied by catering companies (81.8%); The rest prepared food on site. Special care services were supplied for 178 students with special needs. Food allergy, cerebral palsy, psychomotor problems, physical handicap, coeliac disease or special dietary requirements were main causes. School food service personnel scored highest for perceived quality, followed by educational and recreational activities linked to school meals. The lunchroom scored the lowest.

Discussion

The Bilbao School meal program has significantly contributed to tailor school food service to specific needs of students and schools. The program highlights not only the nutritional quality of food supply, but also the educational dimension of school meals by providing students the opportunity to develop and practice skills supportive of a healthy diet.

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N°11

PRIMARY PREVENTION OF CHILD OBESITY AT INFANT AND PRIMARY SCHOOL

(Government-approved and -financed project under France's national Nutrition and Health programme 2002)

Authors

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Dr Jean-Luc Veret, Basse-Normandie Regional Health Education Committee, France

Introduction

The project is helping children acquire healthier food habits. At the same time they are being given greater freedom to choose and learning to make healthy food choices of their own.

Methods

Two-year experimental project using a community-health approach that involves children, parents, professionals (teachers, caterers, school health staff) and the local council. The project:

- took initial stock of the initiation by listening to children and to parents' concerns about quality of school life. Needs were identified, resources assessed, and action priorities and evaluation criteria agreed upon
- action was taken in accordance with local priorities.

Results

The objectives agreed with the school community were to:

- offer balanced canteen meals that children would actually eat
- encourage children to try unfamiliar dishes at tasting sessions
- cut down on snacking during the day
- promote eating of fruit and vegetables and reduce consumption of hyper-calorific foods
- encourage children to build physical exercise into their daily routine.

Discussion

After one school year:

- the school community was enthusiastic about the project
- there was evidence of changes in eating habits (less afternoon snacking, more balanced meal choices)
- canteen staff requested training in food education
- tasting sessions introduced the children to new foods.

Next stage

- Promoting physical exercise
- Measurement of children's body mass index.

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N°12

FINNISH SCHOOL MEALS OF 7TH-9TH GRADE PUPILS

Authors

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Objective

To describe the school meal patterns of Finnish pupils from the 7th to 9th grade, to analyse the differences in relation to recommendations on school lunches.

Methods

In the study of the year 2003 pupils (n=3028) from grades 7-9, in 12 different schools located around the country, answered a structured questionnaire right after the lunch break in class rooms. The study was repeated for the fourth time. The previous studies were carried out in the years 1988, 1994, 1998 at the same schools.

Results year 2003

- 89% of pupils visited the school canteen
- 95% of pupils ate the main course (this is more than on previous studies)
- 50% of pupils drank milk and 47% ate the salad (these are less than on previous studies)
- 60% of pupils liked the main dish
- 60% of pupils used less than 10 minutes to eat the lunch
- only 13% of pupils ate the planned meal with warm dish, salad, milk and bread (this is less than before)

Conclusion

Skipping school meals appears not to be common among Finnish pupils, but only a few of them eat a varied, balanced lunch. There are differences between boys and girls lunch models: boys more often eat the main course and drink the milk, girls more often eat the salad and bread. The pupils see the planned lunch as selection to make their own choices. Pupils more often drink milk when there are at least two types of milk (0% and 1,5% of fat) served.

Discussion

There are big differences between the school lunches offered in different schools. Making the guidelines mandatory and adding alternatives in salad, milk and bread could a way to improve the situation. Active follow-up and training of the canteen personal are important, too.

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N°13

CURRENT PROBLEMS IN NUTRITION OF BULGARIAN SCHOOLCHILDREN

Authors

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A national nutrition survey on 7099 schoolchildren aged 7-19 years was conducted. Nutrition was assessed using 24-hours recalls and food frequency method. Weight and height of schoolchildren were measured. An information on physical activity, cigarette smoking habits of schoolchildren, and socioeconomic characteristics of their household was collected.

Mean daily energy intakes for the most age/gender groups were higher than the recommendations. Risk for inadequate energy input was observed for boys 10-14 years old corresponding to higher prevalence of underweight among them (6.8% with urban, 8.9% with rural residence). No risk for inadequate protein intakes was determined. Total fat consumed was 34.6-38E%, SFA provided 11.3-12.7%.

Mean daily intakes of calcium, iron, vitamin A, thiamin, riboflavin and folate were below RNI for all population groups (41.8-94% RNI).

Physical activity of adolescents was low corresponding to high overweight prevalence – 23.3 % for boys, 19% for girls.

Results

The obtained results were a basis for development of a National Program for nutrition improvement of schoolchildren. A Governmental Decree for improvement of schoolchildren' nutrition through school canteens and refreshment bars was published and is being implemented.

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N°14
**PRELIMINARY QUALITATIVE STUDY OF THE USE OF INFORMATION
BY THOSE DIRECTLY INVOLVED IN NUTRITION EDUCATION
PROJECTS FOR YOUNG PEOPLE**

Authors

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Context

The starting point of our study is the finding that information is under-used when projects are developed by those who play an active role in the field.

General objective

To identify those factors which, positively or negatively, influence information use by persons with an active role in nutrition education for young people.

Methodology

Semi-directive discussions with 10 persons with an active role in nutrition education (in or out of school) in the French-Speaking Community of Belgium.

Results

Half of those questioned said that they make use of youth obesity statistics. Information is used mainly during project preparation, and very little during evaluation.

Respondents quote among the various elements which influence data use the visibility of information, shortage of time to search for information, lack of training in how to interpret information, a dearth of local data and a lack of clear interpretation of findings.

Conclusion

This study enabled elements fostering or curbing data use to be identified. Among the main problems that it highlighted are, not so much lack of data, but lack of local data, and the fact that the information available is used by few of those who have a direct role in the field.

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N°15

IMPROVING LUNCHTIME AT SCHOOL: BUILDING CHANGE AT LOCAL LEVEL, TAKING ACCOUNT OF ALL POINTS OF VIEW

Authors

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Introduction

Since 1996, the French-speaking community in Belgium has been supporting health promotion schemes to improve meals and lunchtimes in elementary and primary schools. A forum was organised in December 2000 under the joint initiatives of the Ministries of Health and of Education allowing consultation between schools, health professionals, caterers as well as parents and local authorities. "Cordes", a non profit organisation financed by the government of the french speaking community of Belgium co-ordinates these projects -"A table les cartables" and "Midis à l'école" and is in charge of counselling schools and partners .

Approach

Following principles of health promotion approach, supports and tools are distributed to enhance the capacity of in-school actors and other partners to develop joint "healthy eating" projects. Meal's organisation (lunchboxes and warm meals) varies greatly from one school to another. Each school is thus encouraged to develop a health-promoting project adjusted to the local needs expressed by pupils and their teachers. The process gives children the opportunity of acknowledging school priorities as well as those of the persons in charge of meals. Teachers are given support through counselling and tools, thus leading to a participatory approach. Educational leaflets are made available systematically to involve parents, caterers, school health professionals and local authorities. Each school council is invited to adopt a Chart for healthy eating at school and to organise discussion on priorities. Educational approach is focussing on choice and the theme of "healthy eating" is approached through "side doors" to raise children's interests: how food is produced, what are the body's needs and health requirements, eating with our senses, etc. Children are involved in the design and development of the project at classroom or school level. The approach of the different points of view makes them aware of the process of collective decision making and its outcome.

Results

According to an on-going survey, more than half of the schools (n= +=1000 schools) in the French part of the country have put better lunchtimes (meals and playtimes) among their priorities for change. A diversity of solutions comes out of the consultation process; the pupils' contributions showed considerable ingenuity and originality; the health implications of nutrition are better known; the large and renewed distribution of tools for teachers, parents, health actors and school staff helps fuel energy to discuss projects. Local authorities as well as school caterers are invited to co-operate.

Key assessment criteria: involvement and development of partnerships, food in school agenda, pupil participation in decision-making, sustainable development, long term projects.

The issues

Developing joint projects as a result of a consultation process requires time and continuous support to actors. Integrating the subject of health in traditional teaching practices needs motivation and imagination skills; dealing with nutrition in and out of the classroom, in a pleasing, playful, non-dictatorial manner raises children's interest and awareness about health and their body needs. Rather than prescribe ideal eating habits, the aim is to stimulate pupils' curiosity, desire to participate and ability to make the right choices for better health. Partnership for health education is encouraged between schools and parents. External resources from the community, the health sector or from different stakeholders (food industry and distribution, caterers, families, politics) should be to focus on the healthy choice target rather than on the interests of a specific sector. The relationship between a democratic process in schools and health promotion is made evident. The participation of the pupils themselves, their families and those responsible for producing school meals calls into question the traditional decision-making process and school management methods.

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N°16
“DIET IN A NUTSHELL – A TASTE FOR LIFE “
DEVELOPMENT OF HEALTHY EATING AT SCHOOL –
A REGIONAL APPROACH

Authors

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Background

“Diet in a nutshell – a taste for life” is a 3-year project initiated in October 2002 by the Danish Minister of Food, Agriculture and Fisheries and carried out by the Danish Veterinary and Food Administration. The main aim of the project is to support motivated schools in establishing healthy meals and other food options to the pupils. The Danish Veterinary and Food Administration has 11 regional offices throughout the country. As of August 2003 these offices have, as part of their job function, the regional responsibility to coach/guide and support local schools in the process of establishing healthy school meals and / or formulate nutritional policies in this field. The aim of the regional approach is to enhance the anchoring and empowerment processes of initiatives regarding meals in school.

However, the employees have little knowledge about these topics, hence an educational programme has been established and evaluated.

Methods of approach

Through an educational programme of 12 working days, 12 regional food specialists have been equipped to carry out the duty of guidance and support of schools. One of the aims of the programme has been to update their current knowledge in the field of nutrition. This has been undertaken through workshops with focus on a variety of issues e.g. “Nutritional status of Danish children”, “Children’s recommended intake of carbohydrates” and “Focus on hygiene”. Furthermore, the aim of the program has been to sharpen the participant’s communicative skills and ability to coach/guide, which is vital for the success of this project.

The workshops aim to combine theory and practical assessments, focussing on, for example, “How to plan and manage a meeting with different stakeholders” and “How to coach in changing processes”.

Teachers have been nutritional specialists from The Danish Veterinary and Food Administration, psychologists and health promotion practitioners with experience in the field of policy making and initiatives regarding school meals. By the end of each working day the programme was evaluated by means of a questionnaire, measuring participant’s satisfaction in a scale of four (very positive, positive, less positive and disappointed, with the option of adding further comments).

Results

12 regional employees participated in the workshops (1 region has two employees appointed to the project). The participation rate was 98%. Only one of the regional employees was male. 68% of the participants hold a BSc. in Nutrition and home

economics, 16% an MSc in Food Technology, 8% in engineering and 8% an MSc in veterinary surgery.

The evaluation showed overall that 58,3% of the participants thought the content of the course was excellent and very relevant. 33% disagreed slightly as they were only satisfied with the course and 8,7% were not satisfied.

Discussion

This is, as far as we know the first intervention in Europe, which has the ability to educate and equip locally based staff in order to incorporate them into a national initiative to ensure the establishment of local health promotion activities. The results show that the course participation has been impressive with a participation rate of 98%. This may be due to the candidate selection procedure and the attraction of undertaking this new task. Most participants were from day one enthusiastic about this new job function, which has influenced the participation rate and their commitment in taking an active role during sessions and group work. The participants' educational background in the field of nutrition goes hand in hand with their new job position, which may also have influenced the participation rate and the enthusiasm. The evaluation showed that 58.3% of the participants thought that the content of the course was excellent and very relevant and 33% were satisfied. This is a relatively high score, however the participants' qualifications varied and may explain the group of participants who were satisfied. 8,7% of the participants were not satisfied with the course. This may also be due to internal factors such as high workload.

Further dissemination. Due to the independent and isolated job function of the regional employees it has been decided to establish a network of the regional employees. Therefore a national team has now been set up. The group meets once a month to exchange experiences regarding development of partnership locally, cross culture collaboration, involvement of stakeholders and to gain new knowledge regarding healthy meals in schools. Furthermore the project coordinators will supervise the regional employees by phone and through co-visits in schools.

Future recommendations. A prerequisite for the success of healthy meals at school and development of nutritional policy is the active involvement of central stakeholders such as parents, students and teachers. It is imperative that the regional employees know how to develop such a strategy and employ it. This is another important task for the group and the project coordinators to highlight and focus on.

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N° 17

HEALTHY AND ORGANIC SCHOOL FOOD FOR 30,000 SCHOOL CHILDREN IN COPENHAGEN

Authors

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Introduction

In Denmark there is no tradition for children and adolescents having the opportunity to buy food at school. Instead Danish children bring a lunch box from home. However studies have shown that 25% of the children in Copenhagen do not bring a lunch box.

Children spend many hours in the Municipality school every day. In addition the children are outside the parents' reach and influence. Therefore, the Copenhagen Municipality has adopted a policy in which the Municipality takes the responsibility for introducing healthy eating habits as well as for creating pleasant eating environments. The goal is to create habits that children can benefit from in their grown-up life. The Municipality also wants to influence the social inequalities, which are characteristic in many health problems, through intervention in the school environment.

Another important part of healthy school food is to implement the goal that the Municipality uses at least 75 percent of organic food in the public kitchens.

Aims

The Copenhagen Municipality has the following nutritional goals for the period 2002-2005: "More inhabitants should eat healthily. This aim is part of the plan for public health and has 5 strategic goals for public health in Copenhagen. The plan is divided into 13 areas for action and nutrition is one of them.

Strategy

To reach this goal the Municipality wants to:

- prevent overweight by encouraging inhabitants at risk to lose weight
- introduce healthy food and dietary habits among inhabitants
- implement a nutrition policy for institutions in Copenhagen
- introduce healthy and organic school food for children in schools.

In 2001 the Copenhagen Municipality decided to establish provision of school meals for the whole community. The project will implement adopted goals for nutrition in the Municipality and is in agreement with the Copenhagen Municipality policy concerning sustainability and use of organic foods. The criteria for success is "all 30.000 students in Copenhagen should be offered organic, healthy, affordable meals at school on a daily basis".

Methods

Through the school food project the municipality wants to focus on:

- Education, learning, organic and health promotion through the development of physical and organisational tools that empower children
- To educate the students as health ambassadors by involving them in meal provision
- In-service training of teachers
- Co-operation between the kitchens in the Municipality and suppliers of organic products
- To establish organic production facilities for the school meals
- School milk provision in all schools
- Education in autocontrol-programs and hygiene.

Discussion

There is an interaction between the students health, well-being, learning capacity and eating habits. The availability of food and the social and physical area has a considerable impact on the children's food habits.

By means of the project "Copenhagen Organic Healthy School Food" the Municipality supports the food habits of the school children. School food is not just a matter of offering more meals. School food has also an important educational angle too. By educating the students and by influencing their attitudes and values in terms of food, healthy eating and environment it is possible to empower the students. The school has the opportunity to facilitate children's learning about healthy food in general and through this to prevent lifestyle and nutritional related diseases, thereby contributing to fight the negative effects stemming from poor social living conditions.

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N°18
PARTNERSHIP BETWEEN AUTHORITIES AND NGO'S IN
DEVELOPING HEALTHY EATING AT SCHOOL –
THE DANISH EXPERIENCE

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Introduction

There is a growing awareness of the fact that partnerships between different stakeholders can be a powerful tool in promotion of healthy lifestyle and habits among citizens. Stakeholders can include authorities, practitioners, researchers, NGO's private enterprises and the advantage is that through partnerships it is possible to obtain much greater effect of campaigns and policy implementations than stakeholders can obtain through individual efforts.

This paper explores the Danish experience in a public NGO partnership project that aims at developing healthy school meal catering systems in Danish municipalities.

The paper evaluates the experiences from the project Meals for children in day care and schools. It tries to answer the questions: what are the characteristics of partnerships in this context? What are the perspectives in NGOs and authorities working together? What are the limitations? Can other stakeholders be involved and what are the further obstacles in developing healthy school meal catering in Denmark.

Partnerships have been investigated in many fields of policy making and public regulation including social policy (Balloch & Taylor, 2001), urban planning (Halkier & Flockhart 2002), international aid and development (Førde et al) and in work-sociology. In the business world partnerships has long been used as a term to describe the cooperation between supplier and customer (supply chain management) and these commercial partnerships have already proven their effectiveness. The basic implication of a partnership is simply to do things together but the current understanding has been developed towards more committed partnerships where authorities uses partnerships with different actors as a part of a public regulation strategy.

Methods of approach

The project was carried out in co-operation between the Danish research institute for Food Safety and Nutrition and the Danish Dietetic Association. The project aimed at carrying out an information campaign on healthy school meal catering targeted at the important stakeholders in and around the school environment.

In Denmark provision of school meals is not compulsory and hence it is up to the municipalities and schools to decide whether school meal catering is to be provided. In most cases no school meal catering exists and food is mostly provided by parents by means of an ordinary lunch box. However the idea of public provision of school meals enjoys support from parents and from many politicians. The reason is that unhealthy eating habits can be influenced in this way and also busy parents have the possibility

of avoiding preparing a lunch box. As a result many schools are open to the idea that school meals should be provided.

The project consisted of three parts. An explorative research part based on a multiple qualitative case study in a number of schools and institutions aimed at identifying obstacles and barriers towards healthy eating, preparation of a handbook part aimed at issuing guidelines to overcome these obstacles and barriers and a dissemination part aimed at making the result available for the food and professionals in schools and institutions.

Outcome

Based on the findings a campaign was carried out. The central element in this campaign was a handbook on meals in daycares and schools were published. The handbook (Christensen et al, 2002) contains guidelines for developing healthy school meal systems and is targeted towards the different actors in the school and institution environment who are involved in meal provision. The release of the handbook was accompanied by papers in professional journals and were announced on the Diet in a nutshell [www.altomkost.dk] website. An electronic copy of the handbook was also published on this site and a series of workshops/meetings with practitioners were held.

Discussion

This poster discusses the outcome of the campaign measured in terms of penetration of the material and in particular the advantages and disadvantages in carrying out campaigns in cooperation between a public authority and a NGO.

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N° 19
"THE GOOD MEAL"
IMPROVING PUBLIC MEALS AND PUBLIC FOOD PROVISION

Authors

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Background

The municipality of Roskilde is in the frontline in food and meal arrangements. The Good Meal (Det Gode Måltid) is part of an ongoing development and reorientation project in the municipality.

The objectives for food and meals in the municipality of Roskilde are:

The municipality of Roskilde regards food and meals as important parameters for quality and responsibility in the municipality. The objective for the municipality is to enlarge the choice of meals in the local institutions. Hereby the municipality aims to provide the Good Meal to all users of public institutions. At the same time the existing arrangements for food will be examined critically to secure the best quality. In short: How do we provide a fundamentally healthy and happy food culture in the "public room"? How do we secure that the citizens are offered the best food we can provide? It is expensive to provide children in nurseries and schools with meals instead of a packed lunch. However, in the municipality of Roskilde we are willing to spend the resources needed - because we find it important.

The municipality of Roskilde takes a nutritional responsibility for public meals. The aim of the Good Meal is to solve the nutritional problems that inevitably exist in the municipal food chain. National investigations suggest that 1/3 of the senior citizens are undernourished, primarily because they do not eat enough. As for pupils and young people they also eat insufficiently in terms of both amount and nourishment. The municipality will spare resources in the long term by implementing the Good Meal due to fewer elderly in need of hospital care and less nourishment related illnesses in the growing generation.

Methods of approach

In relation to the Good Meal the municipality of Roskilde will reorientate public provision of meals into 100% organic grown food. The strategy is one of reorientation rather than one of conversion. By implementing a reorientation in minds and pots we aim to secure a permanent change-over of purchases and food production. After the reorientation, the resources of the municipality will be economically as well as environmentally sustainable. The motto is that the public sector ought to be and can be a locomotive in the agricultural change-over to organic production.

Results

In concrete terms, the Good Meal consists of four independent food and meal initiatives for schools, nurseries, old age homes, and the construction of a new production unit Children`s Food, which will provide for the school canteens and the nurseries.

The projects are combining the following objectives, the fulfilment of which is our criteria for success:

- Enhance public meal provision and thereby encourage the abolition of the packed lunch
- Make the eating environment more attractive and improve the culinary component of the meal
- Increase the ecological part of the raw materials as much as the economy allows. The goal is to reach 100% ecological meals
- Secure the recommended nutrition for the target group concerned
- Be constructive and critical regarding improvement of the existing food supply
- Secure an improvement of the quality of the existing meals in the municipality
- Make food culture an integrated part in the life of children and adults. Take initiatives to remove the barriers that hinder this development.

Our experience shows that most kitchens are able to introduce up to 100% organic food within the existing meal economy. However, a reorientation strategy requires changes in investments. An ecological reorientation (opposite conversion) is a growing process that creates changes in both meals and in cooking, as well as in the eating environment. Public meals not only need to be ecological – they also need improvement.

Discussion

The Good Meal is to create the basis for providing children in nurseries, pupils in schools and the elderly at the old people's homes improved and ecological food supplies. The project should also contribute to the development of a food culture, that makes a meal what it ought to be: basic care for the needs of children and adults. Furthermore, the goal is to develop a food culture that gives children healthy eating habits from the beginning in order to secure the recommended nourishment. This new food culture we aim to develop through well-prepared and tasteful food, not through educational campaigns.

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N°20
**A QUALITATIVE STUDY OF BARRIERS TO HEALTHY FOOD FOR
CHILDREN IN DANISH DAY-CARE CENTRES AND SCHOOLS**

Authors

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Introduction

A study by the Danish National Board of Health (2001) and experience show that efficient meal schemes often fail as a result of practical and financial barriers. Thus the project had two objects: 1) to investigate the barriers faced by schools and day-care centres and their consultancy needs when setting up meal provision schemes; and 2) to develop inspirational material providing knowledge to those implementing meal schemes, in order to facilitate the establishment of these.

Methods of approach

Observations were made with leaders, teaching staff and kitchen personnel in 3 kindergartens and 4 schools with distinct meal provision schemes. The purpose was to discover the barriers and needs in a broad cross-section of distinct approaches to organising meal provision schemes. In the case of kindergartens, food was prepared internally in all three cases. In two of the kindergartens, children were involved in the preparation of meals as an educational element, and in two of the cases, special kitchen personnel were employed. In one case, a teacher was responsible for preparation.

In the case of the schools, two had external food preparation and two had their own food preparation scheme. In two cases, the children themselves participated in the running of the scheme. The selected types show the great diversity in the way Danish food and meal schemes are organised.

Results

The study showed that tight finances and the organisation of practical matters are major barriers to the setting up of meal provision schemes. In addition, the study also showed that deficient cooperation between professional groups and lack of support for meal provision initiatives constituted substantial barriers to efficient meal provision schemes. Poor and deficient knowledge of food safety and rules applicable in the area were also barriers for some.

Inspirational material has been prepared on the basis of the study – *Food for Children in Day-care Centres and Schools* – with advice on the following:

- Getting started (a schedule)
- Food and meal policies
- Choice of food and meal provision scheme (finances and practical organisation)
- The food and the meal
- Organic food
- Food hygiene.

All chapters contain references to the literature and additional information. Finally, relevant pamphlets on e.g. hygiene were also attached.

Discussion

Knowledge about practical circumstances, finances, food safety, etc. is important when a meal provision scheme is to be set up, and inspirational material with specific directions is of great assistance to those implementing schemes. To support the initiatives and work with the various professional groups, written information is not always sufficient, and personal consultation and guidance is often necessary. The project has contributed to identifying some of the areas that a new travelling team in the Danish Veterinary and Food Administration will need to work with. The travelling team will advise schools and day-care centres on the establishment of meal provision schemes. This travelling team now uses the inspirational material in its consultancy services. See also the abstract/the poster ("Diet in a nutshell – a taste for life " - Development of healthy eating at school - a regional approach).

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N°21
PROMOTING GOOD SCHOOL CAFETERIAS IN SECONDARY SCHOOLS
THROUGH NUTRITION ACTION TEAMS

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This 3 ½ year project promoting good cafeteria policies aimed at 4 areas: food offered, hygiene, integrating lessons and cafeteria practice and written policy plans. The NNC cooperated with three regional health services. After situation analysis, project materials were developed and piloted in ten schools in 2001-2002. Action teams of school leaders; teachers, catering staff, 12-16 year old students and parents were supported by the project team during four visits. Three pilot schools used the materials without support. A process and effect evaluation was done using semi-structured interviews, written questionnaires and hygiene quick scans. Results: schools with committed school managers had better results; one school year is too short to create essential conditions for success (special budget, time for training, partnerships); schools found implementing hygiene norms impossible without training. The range of food offered could be balanced; however students need more than lessons to actually buy the healthy choice. Process facilitation is essential, pilot schools without support of the project team had not made much progress. Regional health services should take on facilitation, for technical advice other professionals are needed. National implementation started in September 2003; distributing pilot results, adapting pilot materials for national use, setting up structures and training in national workshops.

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N°22
NATIONAL FRUIT AND VEGETABLE PROJECT FOR PRIMARY SCHOOLS
IN THE NETHERLANDS

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A national 3 year school fruit/vegetable programme for primary schools has started in 2002, funded by the government and the producers. Aim of the project is encouraging children to eat more fruit and vegetables a day, raising awareness of fruit and vegetable intake and knowledge of recommendations.

Fruits and vegetables are distributed free of charge twice weekly to all grades of participating schools (now 276 in 7 cities, aiming at 1000 in 25 cities). In October 2003 the educational materials will be distributed (a teacher's guide, 26 lesson activities, parent leaflet, poster, 5 video films for 9-12 year olds, website, information service for schools, fact sheets and Q&A letters for intermediaries). Monitoring is done throughout the project through collection of food consumption data: a baseline survey in 17 experimental schools and 14 control schools of 10 year old pupils in the Hague; in 15 experimental and 12 control schools in Almelo. The children will be followed in two other surveys in groups 7 and 8 (11, 12 years old). Effects are measured in vegetable and fruit consumption; attitude and knowledge of the children. A process evaluation will be done. The set-up of the project and the (theory based) intervention materials will be described in the poster.

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N°23

SCHOOLBEAT: A COLLABORATIVE APPROACH TO CO-ORDINATED SCHOOL HEALTH PROMOTION IN THE NETHERLANDS

Authors

Mariken Leurs¹, Maria Jansen¹, Goof Buijs² and Herman Schaalma³

Introduction

Health promotion in schools in the Netherlands is fragmented and hardly ever addresses the needs of a specific school and its population. The Schoolbeat development aims to solve this using a coordinated approach, including parental and student participation and expanding school health into the surrounding areas of the school.

Approach

Regional health promoting agencies (areas: mental health, addiction, public health, social welfare and individual student care) have joined forces. The aim is to work via new health promoting school teams, assisted by one of the workers of the collaborating agencies. These teams consist ideally of the school care-coordinator, a parent, a student and a prevention worker. The prevention worker is trained to represent all the collaborating agencies and to assist the teams in choosing health promotion activities based on school health data and input from parents, teachers and students. A Schoolbeat quality-checklist is developed to gain insight into the quality and effectiveness of school health promotion programs, including programs promoting healthy eating.

Discussion

Schools are experiencing many difficulties in acquiring adequate care for problem students. As a result they are - at the moment - less interested in investing in health promotion. To ensure successful tailored school health promotion a chain-care approach is under development linking school health promotion with individual pupil care.

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N°24

PILOT WARM MEALS IN PRIMARY SCHOOLS DURING LUNCHTIME

Authors

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In our country 460,000 schoolchildren (almost 1/3 of the total) lunch daily at school with lunchboxes brought from home. The Primary School Act states that schools only need to provide a room for those children remaining at school during lunchtime. Whether or not school meals are organized, drinks provided with lunches brought from home or supervision organised is up to the parents. There is no tradition at all of eating warm meals in schools during lunchtime.

VOO wants to promote (good) food provision in schools. In order to establish the need for providing warm meals at schools, a pilot in 2 schools with 3 locations in Almere was started. A caterer, *Apetito*, was hired to deliver meals four days a week, for two weeks. These meals met the standards of the Netherlands Nutrition Centre; they were frozen, reheated in ovens in the schools and distributed by the regular voluntary lunch supervisors. Cutlery and china was provided by the VOO, freezers and ovens were installed by *Apetito*, lunch supervisors were trained. During the pilot the meals were free of charge. All parents were informed of the initiative: 75 of the 100 wanted their child to participate. Parents were invited to attend a 'tasting' workshop; of the 45 parents enrolled, only 13 actually attended. 82 children completed a short questionnaire and participated in group interviews at the three locations. 68 % of parents participating in the pilot completed the questionnaire. Parents could also debate the issue on the VOO website. The lunch supervisors were also interviewed.

Results

Almost all pupils indicated that they liked the food; 72-84 % thought the temperature of the food and the portion size good and would like to eat at school every day. Children stated in the group interviews that they ate everything, which was often not the case at home.

Parents who attended the 'tasting' workshop were very positive about the meals, the quality was judged even more positively after the session. Some parents indicated they would like more salad served. Half of the responding parents thought the meals a good idea; they were positive about the quality of the meals, the portion size and the variety of the menu. They did not think serving warm meals at school would deteriorate the quality time parents want to spend with their children. When asked about the price they would be willing to pay for a warm meal for their children, half were willing to pay the indicated price of 3.25 euro per meal; others would rather pay less.

The lunch supervisors were positive about the pilot, especially about the positive reactions of the children. They found the pilot rather time intensive and wished for better equipped facilities in the school. On the basis of the pilot results, the VOO is now offering all public schools and kindergartens in the Netherlands the possibility to have warm meals catered.

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N°25
**APPROPRIATE TERMS OF REFERENCE FOR PUBLIC INVITATIONS TO
TENDER FOR SCHOOL CATERING**

Authors

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Introduction

A major educational reform taking place in Germany concerns the change from half-day to all-day schooling. Provision of appropriate nutrition for school children is subject of deliberation, especially where schools have no canteens and will be using outside caterers. Tender preparation is often carried out by persons with limited knowledge of all necessary aspects as these are wide-ranging from what constitutes healthy nutrition for children to what demands can be made of the catering sector.

Methods of Approach

Commissioned by the Senate Department of Education, Youth and Sport of Berlin together with the health insurance fund AOK, the organisation ÖGS defined the targets for an appropriate school nutrition as encompassing the most up-to-date state of nutrition science research as well as sustainability and economic principles. Dietary principles were adopted from guidelines of the Research Institute of Child Nutrition (FKE) and the German Nutrition Society (DGE e.V.).

Results

A tender document was created considering all above-mentioned aspects together with a key for the evaluation of tender submissions.

Discussion

The tender documents can be adapted according to a municipality's objectives. Thus the public sector can play an important role in meeting key objectives on nutrition, environment and fair business practices.

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N°26

Effect of a fruit and vegetable subscription in Danish schools

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Objective

To measure the effect of a school fruit and vegetable subscription on children's intake of fruit and vegetables after 5 weeks of intervention.

Setting: Seven primary schools in Denmark.

Design and methods

Intervention schools (n=4) were offered a fruit and vegetable subscription comprising one piece per day. Control schools (n=3) situated in another municipality were not offered the subscription. Intake of fruit and vegetables was measured at baseline and 5 weeks after the start of the subscription. Two methods were used for dietary assessment, a pre-coded 24-hr recall form including total food intake and a food frequency questionnaire (FFQ) including only fruit and vegetables.

Subjects: Children, 6-10 years (n=804 from intervention schools and n=689 from control schools). Response rate in dietary assessment was 31%.

Results

At intervention schools 45% of the children enrolled in the subscription. After 5 weeks of intervention both subscribers and non-subscribers had increased their intake of fruit by 0.4 (p=0.019) and 0.3 (p=0.008) pieces/ school day, respectively, but no change was observed in vegetable intake. Total intake only increased for non-subscribers by 0.4-piece/ school day (p=0.008) mainly due to the consistent increase in fruit intake. No change in intake was measured at control schools. Only the 24-hr recall questionnaire was sensitive enough to pick up the changes of the subscription, whereas the FFQ was not.

Conclusion

Five weeks with the subscription affected both subscribers and non-subscribers to increased intake of fruit. This may indicate that the subscription had an additional effect of stimulating parents of non-subscribers to supply their children with fruit. The results stress the importance of evaluating the effect of this type of programme, and the carefulness needed in designing the evaluation study.

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