A school’s own ‘Hearty Eating’ project
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An investigation carried out by a group of 4th-year students during the 1984 summer term revealed what appeared to be serious shortcomings in day-to-day dietary decisions by many pupils. The result has been an increased determination to make them aware of the possible long-term effects of an unwise diet, and to influence canteen decisions both by suppressing some foods and by instituting a “traffic-light” labelling system.

In February, 1984, a ‘World in Action’ television programme entitled Countdown to a Coronary was screened. This was seen by some of our students, and it was later discussed in a Personal & Social Development lesson.

The programme started by showing a man who had just had his fifth heart attack, and then went on to look at the eating habits of schoolchildren in England and Scotland. Doctors are now saying that children today are more likely to have heart attacks when they are older, because of the high amount of fat in their diet. Research into heart disease has shown that there is a thickening of the arteries, which begins as early as 8 to 10 years of age.

In Britain there has been a study by the World Health Organisation of thousands of British workers, and it was found that once arteries begin to ‘fur up’ there is no turning back. The doctors interviewed in the programme said that we should centre our attention on children to catch them while they are young. It is obvious that we need to educate children to eat less fat.

Fat content of school meals
As a result of surveys into children’s favourite foods, the fears of doctors have been confirmed. The meals most children seem to prefer are the ones with the most fat; school meals were highly criticised in the programme, and it was pointed out that these are very often their main meals of the day. In some of the surveys of children’s meals the energy value from fat was as high as 48%. The British Heart Foundation has recommended that of all the energy we get from food only 20-30% should come from fat. At present this percentage averages about 40%.

The programme went on to quote the percentage energy value provided by fat in some popular foods:

<table>
<thead>
<tr>
<th>Food</th>
<th>Energy from fat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish &amp; chips</td>
<td>50%</td>
</tr>
<tr>
<td>Chips</td>
<td>83%</td>
</tr>
<tr>
<td>Steak &amp; kidney pie</td>
<td>52%</td>
</tr>
<tr>
<td>Pork sausage</td>
<td>60%</td>
</tr>
<tr>
<td>Pork pie</td>
<td>65%</td>
</tr>
<tr>
<td>Big Mac &amp; chips</td>
<td>50%</td>
</tr>
</tbody>
</table>

Parents very often do not know what damage they are causing to their children’s health by allowing them to eat so much food which is high in fat.

After discussing the programme as a group, we were left wondering quite seriously how much damage we had already done to our own hearts. We were certainly far more aware of the dangers of eating too many foods high in fat.

We therefore decided that this topic was an important issue affecting the whole community, both from the point of view of personal health and also from the point of view of costs to the National Health Service. We then agreed that we would like to investigate the problem in our school, and considered that a school of over 1000 students would provide a sample large enough to be considered representative of young people within the community.

Some weekly diets
We started out by asking a group of 50 pupils, chosen at random, to write down on a chart everything they ate and drank for one week. Wherever possible, they were to weigh their food; failing this, they were asked to be as precise as possible about the quantities of food consumed (for example, how many thin or thick slices of bread, how many teaspoons of sugar, and so on). We analysed Wednesday’s intake in detail, and derived the nutritional intake from the diets by using the Manual of Nutrition published by the Ministry of Agriculture, Fisheries and Food. Knowing the amount of protein and fat consumed, we were able to calculate the percentage of total energy contributed by these nutrients.

Analysis of weekly diets
After analysis of one full day’s menus for the 50 students involved in this survey, we firstly compared their protein intake with the latest DHSS recommended daily allowance as given in the Manual of Nutrition. The graph (Fig. 1) shows that nearly half (24/50) of the diets analysed provided less than the recommended allowance of 53g of protein. Therefore, if we take our sample as representing the whole school population, 48% of the students are not having enough protein.

Secondly, our results show that 47 out of the 50 diets analysed provided more

![Figure 1. The full-day diet of 50 pupils, showing the number of grams of protein recorded (upper) and the percentage of the day’s energy intake contributed by fat (lower).](image-url)
than the 30% recommended energy from fat given in the NACNE report. In fact, 37 out of the 50 (74%) provided more than 40% energy from fat. Therefore, our results show that only a large percentage of our students, nearly 75%, have diets providing not only more than the recommended 30% energy from fat, but more than 50%.

Our findings brought home to us the very worrying fact that a large percentage of our students are in danger of damaging their health through having diets which are too high in fat. Therefore we decided that we had to do something to warn them of the possible dangers to their health and to make suggestions for ways in which they could improve their diets. What is noticeable from the results of the dietary analysis is that only a small reduction in fat intake for the people most at risk, would bring 60% of the diets down to a far less dangerous level. Therefore, to be realistic, it would not be too difficult for people to make the necessary changes to their diet.

We felt that a very important part of our campaign must involve the type of foods offered in the school canteen. (See Recommendations below.)

One day's school meals

We then took a look at the kind of foods offered in the school canteen, which is organised on a cafeteria system. We made a note of the menus for one week, and then carried out a survey of the total school population, using a questionnaire based on one day's school menu, which asked them which foods they would choose if they had 60p to spend. We were trying to find out which foods from the menu were most popular with young people. As a result we would then be able to find out the nutritional value of the students' diets, with particular reference to fat intake.

When the 1012 questionnaires had been completed we counted every response for every item on the menu and calculated the percentage choice for each item. The results are shown in Table 1. We then analysed the questionnaires to find the following information:

1. The number of students choosing NO major source of protein.
2. The number of students choosing NO fresh fruit or vegetable other than chips or potato.
3. The number of students choosing BOTH chips and a dessert high in fat and carbohydrate.

Analysis of the school meal survey

1. 34% of students chose NO major source of protein.
2. 85% of students chose NO fresh fruit or vegetable other than chips or potato.
3. 68% of students chose BOTH chips and a dessert high in fat and carbohydrate.

One of our conclusions from these results was that one third of our students are choosing meals which contain insufficient protein which is needed for growth. As teenagers are going through a period of growth and development, this was a very worrying finding.

Secondly, a staggering 86% chose NO fresh fruit or vegetable other than chips or potato, and their diets therefore were lacking in fibre and vitamin C.

Thirdly, nearly three-quarters of the students chose both chips and a dessert high in fat and carbohydrate. Therefore, these students had main meals which were made up mainly of fat and carbohydrate, and therefore dangerously low in the more nourishing protein and fruit and vegetable foods.

Recommendations

As a result of our study we would like to put forward the following recommendations:

1. That the school meal menu is quite drastically altered to one which is more healthy.
2. The large choice of items on the present school menu should be reduced.
3. The school meal menu should contain more dietary fibre.
4. Most important of all, there should be a reduction of the fat and carbohydrate content of the school menu.
A plan of action for our school... We have organised a health education campaign for all students within the school, which started in September 1984, entitled *Hearty Eating*. Informative leaflets for both pupils and parents play an important part in this campaign, as well as analogue displays for the pupils entitled 'Hearty Eating'. The campaign is based around the Home Economics and Personal & Social Development lesson time, making use of the video recording made as part of our project. In addition, the teachers of these subject areas are helping out by giving students an opportunity to ask questions and take a critical look at their own eating habits. In an attempt to help the students to choose more healthy foods, the colour-coding system is being used alongside the school menu.

We feel strongly that the problem is not just ours at Offerton High. The School Meals Service in Stockport, and indeed the whole country, needs to make a major review of the meals offered in schools.

...and some outcomes!

Since writing the above account, I have been most encouraged by the response to our report, which was presented as a Community Issues Project to a large audience at Offerton Teachers' Centre. It has aroused considerable interest in the local press and within the Health Authority, and we are particularly indebted to the Physician in Charge of Coronary Care at Stepping Hill Hospital, Stockport, for his professional assistance while researching the causes of heart disease.

The team of six students have given presentations to the Offerton High School governors, the Stockport Metropolitan Borough Area Committee, teachers on an in-service course, a group of students from a neighbouring school, and, finally, the Education Committee. The school meals issue was debated by the Committee, and a working party was set up to make further investigations and to put forward its own recommendations.

It is now planned to launch a major Healthy Eating Campaign in all Stockport Metropolitan Borough primary and secondary schools, starting in January 1986. It is hoped that the campaign will be a joint venture between the education and school meals services, the aim being to encourage younger to choose more healthy and varied diets. Central to the plan is an eyes-catchingly coloured information leaflet designed by an Offerton High School art teacher, which will be distributed to every parent of primary school children and to every secondary school pupil.

It is clear that any campaign aimed at influencing children's eating habits must also involve the education and support of parents. We must also be prepared to accept, however reluctantly, that progress may be slow, since dietary habits are so entrenched with socio-economic factors. For maximum impact the message must be positive and attractive, with emphasis on the benefits of eating wisely rather than on the sacrifices of abstinence!

References


The NACNE points

The following four recommendations are made in the report:

1. A reduction of the average total fat intake by 10%.
2. A reduction of the average total sugar intake by 10%.
3. An increase in total dietary fibre intake by about 20%.
4. A reduction of salt intake by 10%.

The report also advises a reduction of average alcohol intake by 10%. It suggests that the money lost by these reductions could be made good through increased consumption of low-fat foods, such as bread, potatoes, fruit, and vegetables.

Improving food choices: the Surrey initiative

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This article describes a 'healthy eating' project in which, unlike the Stockport programme examined in the previous contribution, the impulse for action has been passed down from the top. The range of foods available in school dining rooms is being modified or extended, and a new programme, operating in all secondary schools in the county, aims at making pupils understand the four main NACNE recommendations, so that they may reflect this knowledge through their food choices.

In Surrey, a two-pronged initiative to improve the choice available to pupils, and to encourage awareness of the health issues involved, has resulted in a *Choosing Food for Healthy Living* campaign. This forms an integral part of Community Health Education, and has the full support of the Surrey Health Education Service (a service which is funded by District Health Authorities in Surrey and encourages health education in the community).

These initiatives have been developed as part of the Authority's response to the NACNE report. As is well known, this committee was set up to investigate British dietary habits and the possible effects that such habits may have on both long- and short-term health. The discussion paper prepared by NACNE recommended certain dietary guidelines, which are, in general, to reduce the amount of fat, salt, and sugar in the diet, and to increase the amount of fibre.

Part of the Surrey initiative is to influence *what is available* over the school catering counter, and the School Catering Service has already started to alter recipes by reducing salt and sugar, and by encouraging the use of wholemeal flour and whole-grain rice in menus. The Service has approached food manufacturers with a view to reducing synthetic additives — in particular, colourings — from products used by the Surrey School Catering Service, and one company is now removing the colouring E102 from its fruit drinks. This additive is known to affect hyper-active children.

Supplementing this is the attempt to make pupils more aware of the choices they can make. This began with meetings organised jointly with the Inspectorate in the autumn of 1984, when Home Economics teachers, catering staff, and dieticians with LEA Inspectors to discuss methods of implementation and to sample a range of foods for a 'healthy life-style'. This was followed by a trial scheme at four secondary schools, which used the traffic-light system of food coding, reflecting the NACNE guidelines. Teaching packs, posters, and handouts for the pupils have been produced to support the campaign.

Following the success of this trial scheme, the campaign has been extended into every secondary school in Surrey as from the beginning of this autumn term.