

Healthy food provision and promotion in schools

Final Report

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Incorporating Scottish Health Feedback

Healthy food provision and promotion in schools

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EXECUTIVE SUMMARY

Background and aims of the research

In October 2006, Glasgow Centre for Population Health, in collaboration with Direct and Care Services (DACs) of Glasgow City Council, commissioned the Scottish Centre for Social Research (ScotCen) to carry out the second phase of an evaluation of the impact of healthy food provision and promotion in Glasgow schools on pupils' food choices in school and in the home.

The main aims and objectives of the research were to:

- Examine the impact of school-based provision of healthy food and drinks on pupils' dietary preferences and behaviour in the home.
- Explore any impact of the approach adopted by DACs in Glasgow on dietary perceptions and practices in the family context.
- Identify factors which might be barriers to healthy eating, and healthy eating preferences and behaviours which might inform DACs' programmes in the future.

Methods

ScotCen utilised qualitative methods to carry out the research. In summary, the following research was conducted:

- Formative phase: In-depth qualitative interviews with key stakeholders (n=6) including Head Teachers, representatives of DACs and NHS Greater Glasgow and Clyde, and parents/carers of pupils and members. In addition, a group discussion was held with a secondary school pupil council.
- Primary school pupils: Focus groups ('friendship minigroups') with primary 5, primary 6 and primary 7 pupils in four schools (n=12).
- Secondary school pupils: Focus groups ('friendship minigroups') with Secondary 1 and Secondary 2 pupils (n=4) in two schools.
- Parents/carers: Focus groups with parents/carers (n=3) of pupils at one primary and two secondary schools. Two in-depth interviews with parents/carers at one primary school.

Key findings

The main findings of the research were:

- A majority of respondents perceived that the school-based provision of healthy food and drinks had made some impact on dietary practice and parental consumer behaviour outside of the school. Pupils and parents reported an increase in the purchase and consumption of fruit and vegetables, as well as the preparation of new dishes such as lasagne or spaghetti bolognese.
- Drinking patterns were also said to have altered outside school, with a decrease in consumption of sugary and fizzy drinks, and an increase in consumption of water, milk and fruit juice.
- Parents and pupils felt that DACs and schools should think very carefully before attempting to influence families more directly in the home environment. It was feared that such initiatives would be met with a mixture of indifference, resentment and resistance.

- A few parents thought that vans selling unhealthy options to pupils outside of the school gates should be banned from doing so.
- Other ways of potentially increasing healthy eating outside school suggested by respondents included cookery workshops for parents and pupils, healthy packed lunch ideas for parents, more links between healthy eating and the taught curriculum and incentives and prizes for pupils who make healthy choices. However, responses indicated that some of these ideas had been attempted before, and had not always been successful.

Views of initiatives running within school were as follows:

- Pupil and parental respondents said that schools initiatives such as breakfast services, the 'Refresh' scheme (providing access to fresh, chilled drinking water) and free fruit schemes had been very successful.
- Most respondents thought that school meals were of good quality, were relatively healthy and were quite appetising. The major criticisms of school meals were that the choice on offer was limited and the amounts prepared for a whole school needed to be increased to cater for all pupils.
- A major difference was observed between the responses of primary and secondary pupils. Following the introduction of the new healthier menus in August 2006, the secondary school respondents criticised the quality of school meals, which they said used cheap ingredients, and were bland and unappetising. Primary pupils tended to praise the food on offer and were in favour of healthy options being included on the menu. Parents tended to reflect the views of the pupil groups within the same schools.
- Packed lunches, brought in from home, were described by pupils and parents as tending to be full of fatty, sugary foods and fizzy drinks.
- As well as concerns related to choice, amounts and food quality, other barriers identified to uptake of school meals were that the school lunch hall environment was off-putting and often cramped. Also, in secondary school, the freedom of being allowed out of school at lunchtime, and to a lesser extent the influence of peers, were said to decrease school meal uptake.
- Primary school respondents thought that the presence of teaching staff in the lunch hall to monitor the environment, to encourage pupils to try new options and to act as role models by eating their lunches with the pupils would also encourage uptake. Secondary school respondents expressed diametrically opposed views – they thought that the presence of teaching staff would have a detrimental effect on numbers taking school meals.
- Improving the quality of school meals tended to mean including unhealthy options on the menu on one to two days per week to secondary pupils, whereas primary school pupils were as likely to say that that unhealthy options should not be part of the school lunchtime menu at all.
- Secondary school pupils considered that they should be allowed to leave the school at lunchtime. It was felt that schools did not have the right to restrict their movements at lunchtime and as the secondary pupils often condemned the standard of school meals, a move to prevent pupils leaving the school premises would result in ill-feeling. A minority of respondents argued that there was a case for stopping secondary pupils leaving the school grounds at lunchtime for safety reasons, and that a partial ban might operate with different secondary years being allowed out at lunchtime on certain days of the week only.

The respondents thought that schools in Glasgow should continue their healthy eating programmes. Even those who criticised the current state of school meal

provision thought that the trend towards healthy school meals should continue as it still had the capacity to influence the dietary practice of a few pupils for the better.

Recommendations

- DACS and schools should continue to provide and promote healthy food and drinks within schools. Initiatives such as free fruit and access to fresh, chilled water were said to be very successful. This school-based provision was also considered by parents and pupils to be having a positive influence on the home environment.
- DACS and school staff should continue to monitor school-based provision. There was evidence in this research that certain lunch menu options were disliked and also the decrease in the number of menu options had been badly received. However, DACS has been aware of this and has acted upon such feedback.
- Packed lunches and snacks were said to be a cause of some concern. DACS and schools could consider producing and distributing a 'healthy packed lunch ideas' leaflet to the home, and schools could consider banning certain items, such as unhealthy snacks and fizzy/sugary drinks in the future.
- In order to increase uptake of school meals, different approaches are likely to be needed for primary and secondary school pupils. Primary pupils seem to favour the current school lunch approach, with only healthy options being provided, and also think that teaching staff have a role to play in promoting school meals uptake. Secondary pupils do not like current provision and favour having unhealthy options on the menu at times. DACS and schools should think of ways to engage with the early secondary school years more successfully in relation to the healthy eating agenda.
- There was only limited support for banning, or partially banning, secondary school pupils leaving the school premises at lunchtime in order to increase school meal uptake. Any attempts at introducing even a partial ban should be considered very carefully, and after consultation with the relevant school staff and pupils. As such a move might provoke a pupil and parental backlash, it might be worth considering a pilot scheme in a few schools first.
- Respondents reported that school-based healthy food and drink provision and promotion had made at least a modest impact on dietary practice outside school. However, beyond educational and information sharing initiatives, such as newsletters sent home, invitations to cookery and 'tasting' workshops, etc DACS and schools should not attempt to influence dietary practice in the home more actively as it is likely to lead to increase parental resistance and resentment.
- DACS and schools should raise the issue of vans and local shops targeting pupils with cheap, unhealthy meal options at lunchtime with the appropriate council department with licensing responsibilities. There might be a case for banning vans operating outside school gates in particular.
- DACS and the Education Department should continue to explore links between healthy eating and the curriculum, the use of school meal healthy choices incentives and prizes and ways of improving the school dinner hall environment.

This research suggests that DACS and schools themselves have a difficult job in overcoming the primary and early secondary school divide, in relation to retaining secondary school pupils as consumers of school lunches and as satisfied customers. Although there is evidence that DACS, the Education Department and other partners have successfully made a positive impact on the home environment, attempts to be more proactive in this regard have to be thought through very carefully, and are also

likely to encounter significant resistance given other societal and cultural forces in operation.

1 INTRODUCTION

Poor diet is recognised as a significant contributor to Scotland's poor health record. Improving children's diet can have a major impact on the health of children with beneficial outcomes for educational attainment, physical well being and improved health later in life.^{1, 2} The Scottish Executive's Health Improvement Programme recommends eating more fruit and vegetables, and the Executive has promoted initiatives across Scotland such as *Hungry for Success*¹ and the Free Fruit in schools initiative³. Low fruit and vegetable consumption is a key risk factor in the development of chronic diseases, such as cancers and cardiovascular disease.^{4, 5}

The school environment therefore has a vital role to play in providing healthy food and drinks to pupils. *Hungry for Success* has a number of far-reaching recommendations including the setting of nutrient standards in school meals, improving the social and physical environment within schools and removing any stigma for those receiving free school meals. Glasgow City Council has been very active in its efforts to establish healthy eating throughout its schools, with initiatives such as the Big Breakfast, Fruit Plus (this provides fruit more frequently and to a wider range of pupils than the free fruit initiative), Fuel Zones and Glasgow's Refresh (provision of water coolers in schools). Previous evaluations of these initiatives suggest that they have had a positive impact on pupils' views, attitudes and behaviours towards healthy eating.^{6, 7}

In October 2006, the Glasgow Centre for Population Health, in collaboration with Direct and Care Services (DACS) and the Education Department of Glasgow City Council, commissioned the Scottish Centre for Social Research (ScotCen) to carry out the second phase of a project exploring healthy food provision and promotion in Glasgow schools. The first phase of this research investigated the impact of the availability of healthy school meal choices on actual consumption of foods/drinks by pupils within school and also explored important influences in relation to the physical and social environment.⁸ The focus of the second phase was on any potential impact of healthy eating initiatives within schools on the dietary practices and preferences of pupils beyond the school gates, and also on their families in the home environment. This report examines the impact of the approach adopted by DACS, the Education Department and partners in Glasgow on healthy eating outwith school, predominantly in the home, as well as stating what the implications are for future programmes and initiatives.

¹ *Hungry for Success A Whole School Approach to School Meals in Scotland, Final report of the Expert panels on School Meals*, November 2002 www.scotland.gov.uk/library5/education/hfs-00.asp

² *The Scottish Health Survey 2003 Volume 3: Children, Fruit and vegetable Consumption and Eating Habits*, (Eds Bromley C, Sproston K and Shelton S) Edinburgh, 2005. www.scotland.gov.uk/Publications/2005/12/02160336/04160

³ MacGregor A and Sheehy C. *Evaluation of the Free Fruit in Schools Initiative*. ScotCen 2005: <http://www.scotland.gov.uk/Publications/2005/12/21110322/03222>

⁴ *World Health Organization Diet, Nutrition and the prevention of Chronic Diseases: Report of a joint WHO/FAO expert consultation*. WHO Technical Report Series, Geneva, Switzerland, 2003; **916**.

⁵ Maynard M, Gunnel D, Emmett P, et al. *Fruit, vegetables, and antioxidants in childhood and risk of adult cancer: the Boyd Orr Cohort* Journal of Epidemiology and Community Health, 2003; **57**:518-255.

⁶ Greater Glasgow NHS Board. *A Summary of the Evaluation of Glasgow's Big Breakfast Pilot Project*. 2004. Glasgow, Greater Glasgow NHS Board.

⁷ HM Inspectorate of Education. *Monitoring the Implementation of Hungry for Success: A Whole School Approach to School Meals in Scotland. Report on Progress October 2005*. 2005. Edinburgh, HMSO.

⁸ *Glasgow Centre for Population Health. Briefing Paper 1. Healthy Food Provision and Promotion in Primary School: What impact is it having on food choices? Glasgow: GCPH, 2007.*

2 RESEARCH AIMS AND OBJECTIVES

2.1 Evaluation aims and objectives

The main aim of the research was to:

- Examine the impact of school-based provision of healthy food and drinks on pupils' dietary preferences and behaviour in the home.

The main evaluation objectives were to:

- Explore any impact of the approach adopted by DACS in Glasgow on dietary perceptions and practices in the family context.
- Investigate if there were any differences in impact or perceptions of impact between different groups (e.g. resulting from different ages of pupils, variations in levels of relative deprivation – e.g., entitlement or not to free school meals, those taking school versus packed lunches etc) and what factors might help to explain these differences.
- Ascertain whether secondary pupils perceived that healthy food provision in primary school affected their past and current dietary practices.
- Identify factors which might be barriers to healthy eating, and healthy eating preferences and behaviours which might inform DACS' programmes in the future.

3 RESEARCH DESIGN AND METHODS

3.1 Summary of the research

The research comprised the following components:

- Formative phase: In-depth qualitative interviews with key stakeholders (n=6) including Head Teachers, representatives of DACS and NHS Greater Glasgow and Clyde, and parents/carers of pupils and members. In addition, a group discussion was held with a secondary school pupil council. A meeting with the steering group also helped shape the research.
- Primary school pupils: Focus groups ('friendship minigroups') with primary 5, primary 6 and primary 7 pupils in four schools (n=12).
- Secondary school pupils: Focus groups ('friendship minigroups') with Secondary 1 and Secondary 2 pupils (n=4) in two schools.
- Parents/carers: Focus groups with parents/carers (n=3) of pupils at one primary and two secondary schools. Two in-depth interviews with parents/carers at one primary school.

Each of these research components is described in more detail below.

3.2 Formative phase – in-depth interviews and group discussions

During this phase, ScotCen researchers conducted six in-depth interviews with key stakeholders, and convened one group discussion with a pupil council. A meeting was also held with the project steering group which helped shape the development of the research in a number of ways. For example, the selection of the six schools and the number of groups to be held in the four primary and two secondary schools were decided at this meeting, through discussion and negotiation with DACS and the Education Department. Ethical permission for the study was obtained from the Director of Education within Glasgow City Council.

In-depth interviews were carried out with:

- Head Teachers/senior school staff at some of the participating schools
- Representative(s) from DACS and a Hungry for Success Coordinator
- A parental representative
- A Health Promotion Officer from NHS Greater Glasgow and Clyde.

These in-depth interviews and group discussion covered issues such as: the background to the project and healthy eating initiatives within Glasgow; the hopes and expectations of the respondents for the initiative and the evaluation; perceptions of impact and success so far of healthy eating initiatives as well as the advisability of the initiatives continuing in their current format in the future; and any perceived impact on dietary practice outwith the school. This research took place between November 2006 and January 2007.

Views elicited in the interviews and group discussion were taped and transcribed. Emergent themes were identified; these helped frame the development of questions in interview schedules and topic guides for the parents and pupils.

3.3 Number of schools

The schools were selected by the steering group during the formative phase. The six schools were identified and selected in order to represent:

- Different levels of socioeconomic status (e.g. from relatively affluent to relatively deprived – the level of free school entitlement for each school was used as a proxy for socioeconomic status)
- Different age groups (primary and secondary schools); selected primary schools were also part of the selected secondary school clusters in most cases
- Continuity with the first phase of the research: most of the primary schools had been involved in the first phase. As a result any learning from the first phase could be utilised in the second phase of the research.

3.4 Views of parents and carers

In the four schools in which ScotCen researchers attempted to convene focus groups with parents and carers the mode of recruitment was agreed with senior teaching staff. In most instances, the schools distributed consent letters/information sheets to parents and carers and asked those that were willing to take part in a discussion to contact a nominated member of school staff or the research team directly, or return a consent form to the school or ScotCen. School staff also augmented the number of parents and carers by approaching individuals directly. Parents were informed that donations would be made to school funds as an incentive to take part in the research. The research team advised school staff to distribute forms to parents to reflect the following range of issues:

- Parents should ideally have had sons and daughters in the primary and secondary years covered by the pupil 'minigroups' (primary 5 to secondary 2)
- The pupils of the parents should be engaging in a range of eating practices within school (i.e. take school meals, packed lunches or eat outside of school at lunchtime)
- Parents should not solely be 'the usual suspects', i.e. parents already involved in the life of the school via PTAs or school boards, although inevitably this group would be willing to take part and should not be ignored in terms of recruitment.

In one primary school it proved impossible to convene a group discussion due to a lack of response from interested parents. In this school two in-depth interviews with parents were carried out. In the three other schools, two secondary and one primary, group discussions were convened with parents; the numbers in these groups ranged from 3 to 5. It should be noted that the two primary schools were feeder schools for the two secondary schools.

The parental groups and interviews addressed issues such as:

- Knowledge and views of the healthy eating initiatives within schools, and the environment within schools for food and drink consumption
- Parental perceptions of pupils' dietary practices and preferences within schools, covering packed lunches, school meals, snacks and possibly lunches purchased outside school (secondary school groups)
- Perceptions of changes in their children's eating habits
- The wider context surrounding healthy eating, and barriers and facilitators for healthy eating, including the availability of healthy food, the existence of healthy food cooperatives, the cost of healthy food etc
- Perceptions of impact, if any, on dietary behaviours within the home, and possible links between school initiatives and any changes within the home
- Whether any observed dietary changes had been maintained
- What factors, if any, might encourage or enable parents to adopt healthier eating practices within the home
- Any changes DACS and schools could make to support parents provide more healthy food in the home, and whether parents might want to provide such a healthy diet in the first place.

These group discussions and interviews were tape-recorded and fully transcribed with the consent of the participants. The groups and interviews took place in February and March 2007.

3.5 Views of primary and secondary school pupils

The research team convened friendship 'minigroups' with school pupils. These specialised focus groups are relatively brief (taking about 20-25 minutes to complete) and involve 'friendship mini-groups' – each group normally consists of small numbers of friends (3–4 pupils usually, although one group had 6 participants in this project), often of the same sex (again, not the case in this project). As the young people involved in this study were comfortable in each other's company, the group format was ideal in allowing the sharing of views and prompting the participants to think and respond to the opinions expressed by others.

The research team worked with the six schools in order to recruit the pupils to the groups. School staff were asked to circulate information and 'opt-out' consent sheets to parents and carers of groups of friends to reflect the following characteristics:

- The groups should contain those pupils that usually take school lunches, usually take packed lunches or eat outside of school
- If possible, the groups should have pupils entitled to free school meals and those without such an entitlement
- In the four primary schools a group should be convened in the primary 5, 6 and 7 years (n=12 groups)
- In the two secondary schools a group should be convened in the secondary 1 and 2 years (n=4 groups)
- Both boys and girls should be participants, although not always within the same group.

These groups addressed issues such as:

- Dietary behaviours and preferences within the school, from breakfast service to snacks, consumption of school lunches and packed lunches

- Perceptions of the healthy eating initiatives within the school, standard of food and drink on offer
- Influence of pupils, if any, on food bought for and provided in the home
- Impact of schools initiatives on pupil preference and eating behaviours within the home
- Barriers and facilitators for the adoption of healthy eating behaviours.

As a result of involving different primary year groups, as well as secondary schools and their primary school clusters, it was possible to compare responses from the different age groups of pupils in relation to similar activities and issues they would have experienced within primary and secondary schools. The 16 group discussions were carried out in February and March 2007. The group discussions were recorded and fully transcribed, with the consent of the participants and their parents.

3.6 Analysis

The key stakeholder interviews were digitally recorded and fully transcribed. After emergent themes were identified, these transcripts were used to help frame research instruments and questions for the main phase of the research. The parental focus groups and interviews were digitally recorded, fully transcribed and entered into N6, a qualitative analysis programme. Thematic analysis was carried out, and verbatim, anonymised quotes were used in the final report. All focus minigroups with pupils were also digitally recorded, fully transcribed and entered into N6. Again, thematic analysis was carried out and verbatim quotes were used in the final report.

4 RESULTS

4.1 Focus group participants

Table 4.1 shows that the pupil minigroup size ranged from 3 to 6 pupils. It is also worth noting that all of the pupil groups were of mixed gender and the respondents reflected a range of different lunchtime eating patterns at school, including taking school lunches, packed lunches or eating outside school. Eating outside school, as would be expected, was cited more by secondary school minigroup respondents. Many of the respondents reported that they adopted different lunchtime eating practices, and would therefore have, for example, school lunches and packed lunches during the same week. The parental respondents were almost all female and many were able to respond on behalf of children in the same school years as those pupils involved in the minigroups, as well as in relation to other children in school years not covered by the pupil-based research. In School 6 the parents described a range of lunchtime eating behaviours adopted by their children. The parents in School 3 said that their children usually favoured school meals. The School 4 parents prepared packed lunches for their offspring whereas the School 5 parents thought that their children usually preferred to eat outside school.

Table 4.1 School type by socioeconomic status and respondent groups

School	Type of School	Socioeconomic Status	Pupil Groups	Parental Groups
School 1	Primary	Relatively deprived	Primary 5 (n=5) Primary 6 (n=5) Primary 7 (n=5)	-
School 2	Primary	Relatively deprived	Primary 5 (n=5) Primary 6 (n=3) Primary 7 (n=4)	-
School 3	Primary	Relatively deprived	Primary 5 (n=4) Primary 6 (n=4) Primary 7 (n=4)	Joint interview (n=2)
School 4	Primary	Relatively affluent	Primary 5 (n=3) Primary 6 (n=4) Primary 7 (n=4)	Focus group (n=3)
School 5	Secondary	Relatively deprived	Secondary 1 (n=5) Secondary 2 (n=6)	Focus group (n=4)
School 6	Secondary	Relatively affluent	Secondary 1 (n=5) Secondary 2 (n=5)	Focus group (n=5)

4.2 Factors influencing eating behaviour at school

Both the pupils and the parents were asked why the pupils concerned had adopted their particular eating behaviour at lunchtime. Most of those who expressed a view indicated that the pupils were the ones who made the decisions as to what they would eat and drink in school or outside school at lunchtime. Parents also were said to influence the decision, particularly but not exclusively in the case of the primary 5

and 6 pupils. Those who were eating outside school at lunchtime tended to report unhealthy eating practices, with fatty foods and sugary drinks being mentioned.

The respondents were also asked if there had been any recent changes in school lunchtime dietary practice, and the reasons for such changes. A minority of respondents reported that there had been a change of practice. The major reasons cited for recent changes of practice included being allowed out of the school in secondary school, a dislike of school meals or menu changes, problems with the introduction of a swipe card system as well as parental influence. In addition, it was stated that pupils would often take school lunches if they liked the menu option for the day in question, and also for other reasons such as wanting hot food rather than packed lunches.

AND WHAT SORT OF THINGS DO YOU EAT AT LUNCHTIME?

Eh, rolls and sausage and burgers and Chinese and sausage rolls and steak bakes.

Mexican chicken, steak bakes, chips and when I go to the Chinese I get chips an curry sauce.

AND WHAT WOULD YOU HAVE TO DRINK?

Lucozade Sport sometimes and Pepsi.

Im Bru.

Focus Group 13, School 5 First Year pupils

4.3 School food and drink initiatives

Both the pupils and parents were asked what the main initiatives running in their schools were at present. *(Please note that the first phase of the research covered the diets of children within school in much more detail; the issues were covered briefly in the second phase of the research in order that respondents could consider all elements of the initiatives within school that might have had an impact on dietary practice outside of school.)* The primary pupils were able to comment on the breakfast service, the free fruit scheme, access to fresh, chilled drinking water, the school meal service and, in a few cases, the school tuck shop. It is important to note that in two of the primary schools the tuck shop no longer operated as it was viewed as selling too many unhealthy options. Group participants responding on behalf of secondary schools also mentioned vending machines, which were viewed as offering both healthy and unhealthy choices. The secondary school pupils said that they did not have tuck shops but there was some confusion as to whether free fruit was still available – those pupils who were certain that free fruit was not on offer in secondary school argued that it should be. Also, it was reported that one secondary school did have an official breakfast club whereas the other school offered a limited supply of food and drink at breakfast of mixed quality, and said to be relatively expensive. The parents expressed mixed knowledge of the school initiatives, with the respondents from School 5 in particular stating that they did not really know a great deal about what was available within school at that time.

... AND WHAT ABOUT YOUR TUCK SHOP, DO YOU HAVE A TUCK SHOP?

We used to have that but ...

Miss X thought it was costing too much to buy it and it wasn't good for us.

Focus Group 7, School 3 Primary 5 pupils

WHAT DO YOU KNOW ABOUT THE FOOD AND DRINK AVAILABLE WITHIN THE SCHOOL DURING THE DAY?

Not much...

I don't know anything.

Well it's called the Fuel Zone now... I think they've got a lot more variety on, a lot of kind of greasy foods as well I'm assuming, they've got a lot more salad stuff and fruits and things like that.

Focus Group 19, School 5 Parents

4.4 Perceptions of schools initiatives and packed lunches

Overall, a majority of respondents thought that the healthy eating initiatives within schools were positive and of good quality. For those who were able to offer an opinion this was especially true for free fruit initiatives, breakfast service and access to fresh, chilled drinking water - very few criticisms were made in relation to these specific initiatives. There was much more variation of response when the issue of school meals quality was raised. On the whole, the primary school respondents thought that the school dinners were of good quality, were relatively healthy after recent changes and were also quite tasty. Complaints were also raised from the primary pupils that amounts were too small for the whole school, the choice was a bit limited (indeed the recent reduction in choice did not seem to have been well-received) and either that more healthy or unhealthy options were also needed, demonstrating how difficult it is to cater for this age group. In contrast to the more positive view of primary school pupils, the secondary pupils, were scathing in their views of school lunches. They shared the opinion expressed by a few of the primary pupils that the amounts were too small, and a serving would not be sufficient to satisfy the appetite of a pupil. In addition, in common with many of the primary pupils, secondary pupils argued that if their class or year was not one of the first to be served the choice became even more limited as all of the good options would have been taken already. However, the secondary school respondents were also quite critical of the standard of the food, the poor quality of the ingredients used and the general tastelessness of much of the food on offer. Many of these responses indicated that changes to make the school menu more healthy had not been well-received by these pupils, although even those who wanted healthier options did not seem to appreciate the current school lunch system.

There was some evidence in two of the primary schools that an age effect was influencing responses, as might be concluded from the primary and secondary school groups. In Schools 1 and 3 the primary 5 pupils held the most positive views, indeed in School 3 the primary 5 respondents wanted school lunches to become even more healthy, but the older primary years were less enthused overall, although their views were positive in the main. In the other primary schools the different primary year groups expressed similar views.

The parents who were able to express a view about the school initiatives tended to reflect the views of the pupils within the same schools. The secondary school parental groups were therefore quite negative in tone, especially the School 6 parents, whereas the parents responding on behalf of primary schools felt that the initiatives were working well and were also in favour of further developments to make, for example, school lunches more healthy and appetising.

I think they're quite healthy but sometimes I think they need to lay off a bit of the fat stuff that they're putting in food cause you get pizzas and burgers and there's not enough healthy choices.

Focus Group 7, School 3 Primary 5 pupils

Because it's healthy. We're not allowed fizzy drinks but we get apple or orange juice.

There used to be a tuck shop but that stopped last year 'cause now we're a healthy school. You get toast instead.

Focus Group 5, School 2 Primary 6 pupils

I took them at the start of the year but then they just kind of just got rubbish...

They've actually taken out basically everything that makes a good meal, all the tasty (bits)... they've taken all the salt out, fats .. if it's like macaroni cheese they use like very low fat cheese so the cheese doesn't taste like cheese and it just doesn't taste like anything really and the pasta – it's just boiled, the rice boiled, just nothing, no' even the tiniest bit of salt.

Focus Group 15, School 6 Secondary 1 pupils

I don't know, when you get lasagne an all that it's pure hard and everything, it's disgusting...

Every time I get it it's pure nice.

Focus Group 13, School 5 Secondary 1 pupils

So that's a big factor but he quite likes to eat the school meals and I think from what I've seen they've improved a bit and ...

Yeah, that definitely has improved and they don't have as many cakes and sweets and things, well they don't have sweets at all now...

Focus Group 18, School 4 parents

4.4.1 Perceptions of packed lunches

The respondents were asked to give their views on the quality of packed lunches taken into school by pupils. A minority of the pupils and parents stated that packed lunches tended to be of good quality. The general consensus among pupils and parents, though, was that the quality and nutritional value of packed lunches was mixed at best. Many examples were given of packed lunches taken into school featuring crisps, chocolate, sweets and fizzy drinks such as Irn Bru. It was pointed out, though, that this pattern was not reflected across the whole school, with other packed lunches viewed as being more healthy as they contained sandwiches, yoghurt and fruit juice or water. Also, a few parents stated that they liked to know what their children were having to eat during the school day and thus liked preparing packed lunches for them. Pupils who did not like school meals and also were not allowed out of school saw benefits in packed lunches too. In most groups, though, some concern was expressed by respondents in relation to the standard of packed lunches and snacks being consumed by pupils during the school day.

Like some people have like a lot of chocolate bars in their packed lunches.

... and ginger, lots of ginger.

And sometimes they have two bottles of coke and two packets of crisps...

Focus Group 1, School 1 Primary 5 pupils

And the thing about packed lunches is... you know what you're putting into that packed lunch so you know what they're eating every day, whereas if you're giving them money for school lunch you really don't know what they're eating.

Focus Group 20, School 6 parents

4.5 Comparisons between primary and secondary school initiatives

The secondary pupils and the parents representing Schools 5 and 6 were asked if there were any differences between the initiatives available in the primary and secondary schools, including any perceived variations in the quality of food and drink on offer. The pupils thought that more children took school lunches in primary school compared with pupils in secondary school. In School 6 this was because the respondents thought that the choices available in primary school, as well as the

standard of school lunch, such as the quality of the fish, were vastly superior to the secondary school lunch system. Although this was also argued in the School 5 group, the predominant view was that the fact that pupils also now had the option of leaving school at lunchtime and as a result there was a decrease in the proportion of pupils taking school lunches. As would be expected, differences between initiatives available within the primary and secondary sectors, such as free fruit schemes in primary schools, were alluded to within these groups – as has been said the free fruit scheme were praised in the main. The parents tended to say that there was not a great deal of difference between the primary and secondary school initiatives, although individuals in both groups said that either primary or secondary school meals were superior.

Oh, the primary school lunch was lovely, I don't know what's the matter with this food.

... I mean £1.15 you got your hot meal, you got a milk or a water or a fruit juice and you went to the next wee bit and you could get a soup and a roll and then the next wee bit was all the fruit and vegetables, you have the pick and mix and you were allowed to take as much fruit as you wanted, it was always really nice fruit.

Focus Group 16, School 6 Secondary 2 pupils

4.6 Barriers to taking school meals

The respondents were asked what were the main factors involved in pupils not taking school meals.. The main factors which were viewed as stopping pupils from eating school dinners were that the food and drink on offer was unappetising, there was a lack of choice and availability particularly when other classes had already visited the Fuel Zone and the lunch hall environment, characterised as featuring lengthy queues and overcrowded eating areas in nearly all schools, was poor. As has been said already, the recent reduction in school meal options did not seem to have been appreciated by a number of the respondents. Also, those who thought that pupils were being put off by the quality and taste of school dinners tended to argue that the reintroduction of more unhealthy options would attract more pupils to school lunches again. A few respondents said that meals could attract others if they were made more healthy and, if, for example, more vegetarian options could be provided. Pupils also acknowledged that although the lunch hall environment was at times off-putting with its lengthy queues, those that ventured out of school were often willing to put up with similar or worse conditions.

It depends on if they liked the school lunches or not.

If you're last in the line... 'cause always the good things are always away and you get the lasagne, that's no' very nice... you end up getting vegetarian meals or something you don't like.

Focus Group 8, School 3 Primary 6 pupils

I think it's more like the food in the Fuel Zone isn't good, the vending machines can actually give you chocolate which is a lot better. If you go out you can actually eat in the bakeries, burger vans, anything... that actually do taste nice so I think more people would queue for that rather than queue for something that wasn't so nice.

Focus Group 15, School 6 Secondary 1 pupils

Other factors which were thought to decrease the likelihood of taking school lunches were that secondary school pupils wanted to leave the school at lunchtime, and in a minority of cases there were influences from peers, parents or gender-related effects. The secondary school pupils and parents reported that pupils in the early secondary years relished the freedom of leaving the school at lunchtime and being able to explore local shops and centres. In one parental group it was also argued that this effect wore off as the pupils advanced through secondary school and the rites of passage afforded by leaving the school lost much of their appeal.

The primary school respondents thought that peer influence had little impact on their own dietary behaviour within school. However, the secondary school groups expressed the view that friends would often follow the same pattern of behaviour at lunchtime. Parental influence was not viewed as holding much sway among respondents, apart from in the instances when the parents provided packed lunches or insisted that pupils should take school lunches.

There was no clear consensus on the impact of gender on eating habits. School 4 respondents stated that boys tended to eat more packed lunches as this enabled them to get outside to play football and other games in the playground more quickly. The School 6 secondary 2 group respondents argued that more girls took school dinners as they were more choosy, sensible and not as prone to eat junk food. The only other pupils that perceived there to be a gender difference were in two of the School 3 groups – they argued that girls preferred packed lunches as it either gave them more options than school dinners or because they preferred unhealthy food and drinks. Stigma related to free school meals was raised by one parental group as a possible obstacle to eating school lunches, as was the power of food companies advertising unhealthy products.

I think boys probably live in the moment a wee bit more, they're just kinda .. eat a burger, eat the chips, whereas if I was to eat a burger and chips I'd be like... I'm not going to really enjoy it that much, it's not going to do me any good...

Focus Group 16, School 6 Secondary 2 pupils

X says that the canteen is always busy, there is always queues. I think she tends to go with her friends at lunchtime. The centre is busy as well, full of the kids doon here so I think they've just got the choice to eat takeaways and prefer that to what's on offer... Sometimes she'll go a walk along to McDonalds as well.

Focus Group 19, School 5 Parents

4.7 Factors assisting school meal uptake

As would be expected, many of the factors which were perceived as facilitating school meal uptake were the converse of the barriers cited above. The major perceived facilitating factor was that school lunches should offer more choices for pupils, and in particular a few more unhealthy choices should be reintroduced to the school menu. Again, demonstrating how difficult it is to cater for this age group, a minority of respondents called for more healthy food to be provided to attract other pupils. Another factor which was viewed as being important was for more food to be made available for the whole school – it was thought that this would also reduce the problem of those at the front of the queue all opting for the same meal and thus further reducing the choice for their counterparts at the rear of the queue.

The influence of teaching or school staff was viewed as being double-edged. Firstly, the primary school pupil and parent groups especially said that teachers could address healthy eating issues in the classroom and relate it to the school lunch hall. They were also more likely to think that teaching staff eating in the school dining area provided a good role model for the pupils, although these groups also suggested this would make little difference. The secondary school groups were more likely to say that there might be a negative effect if teachers sat with pupils at lunchtime, as pupils would want to have time away from teaching staff. The issue of cost was also raised as a facilitating factor, although the responses were far from consistent. On the one hand, respondents argued that healthy food was often cheaper than other alternatives, school lunches were relatively cheap and other initiatives, such as free fruit, had no cost at all. On the other hand, a few participants said that packed lunches could be made quite cheaply and others also gave examples of other food, often described as junk food, available near the school at lunchtime at low cost.

Pupils and parents also called for more advertising of school lunches and for parents especially to be made more aware of schools initiatives. This issue is covered in more detail in sections 4.10 and 4.11 below.

The only thing would be, but this isn't healthy for you, is getting more unhealthy stuff in but I wouldn't like that if they did that, I think they should keep going but have more ...like have more choices for you cause they only have like three.

Focus Group 1, School 1 Primary 5 pupils

There are table monitors that keep an eye on what people are eating and if somebody is not eating much they encourage them to eat their lunch.

The teachers take school lunch but they take it to the staff room. I bet they've got cakes in the staff room!

Focus Group 8, School 3 Primary 6 pupils

The doughnuts are like 44 pence and you can get like six doughnuts for like 50 pence in Morrisons and that...

... that bakers is really good value because..., I know it is pure advertising right and... it's a bottle of juice ...Or water, roll and potato scone or something and a doughnut for One pound.

Focus Group 16, School 6 Secondary 2 pupils

4.8 Impact on the home

4.8.1 Evidence of influence on dietary habits outwith school

Respondents were asked if the healthy eating initiatives at school were having any impact on foods and drinks being consumed outside school. The majority of the participants argued that the healthy eating agenda within the school had influenced what pupils were eating at home, and what parents were purchasing in local shops. This was not viewed as being solely due to the school meals service; indeed many examples related to pupils developing more of a taste for fruit and the 'Refresh' water initiative having some effect on drinking patterns. In addition, there was often no clear consensus in these groups, with other respondents also arguing that there was minimal or no impact on dietary practice as a result of school initiatives.

When these responses were analysed by school and type of respondent most school groups were able to give examples of different dietary practice which was thought to have resulted from the DACS' initiatives. However, in the primary sector School 2 pupils tended to say that no great influence had been observed. As might be expected given the opinions expressed above, the School 6 pupils and parents stated that the school initiatives had not impacted on eating outwith school at all, mostly due to the perception that food and drinks on offer were of poor quality. However, pupils and parents from the other schools were able to give examples of increased purchase and consumption at home of fruit and vegetables and a decrease in the consumption of junk food and fizzy drinks. Also, in a few pupil and parental groups the cooking of new (for the pupils in question) dishes such as lasagne, moussaka and spaghetti bolognese were said to have taken place, either directly or indirectly attributable to the schools initiatives.

...I think they do seem to talk a lot about healthy eating, there's a big health drive, they're much more aware... at home my children will try vegetables and they're both quite good really at eating vegetables along with their dinner and they like to check at the end of the day that they've had their five portions. I know that that's down to what they're hearing in school you know, so that's quite good.

I think the fruit initiative was a big thing, I mean I always had fruits but what I'm finding, after the school brought in all the fruit, I started buying more and more fruit because I couldn't keep up with the demand for fruit so I just thought 'this is great'... The initiative in the school has made them eat I would say probably double what they ate before in fruit...

That's what happened with X, he couldn't get the hot dog and he had the chicken curry and he came home and he said 'mum, it was

absolutely delicious' but I thought if the hot dog had been there he would have had the hot dog and he wouldn't have known....

Focus Group 18, School 4 Parents

The parents who reported that there was some evidence of change in eating habits as a result of the school initiatives spoke of the benefits of preparing fresh food, the relative ease of preparing healthy meals and also acknowledged the support of the school in furthering the healthy eating message. They also suggested that children have great influence in determining what foods and drinks are purchased for the home – examples were given of choices suggested by children during shopping trips. The cost of healthy food when compared with unhealthy food elicited a mixed response. Pupils tended to say that healthy food and options were cheaper, although others mentioned relatively unhealthy food and special offers on such food types that were very inexpensive. Also, it was said by both respondent types that organic food could be expensive. In one parental group in particular it was stressed that less affluent parents might struggle to buy good quality food at times. The availability of healthy food, although not raised directly in every group due to time constraints, was not thought to be a great problem, although some of the groups of pupils mentioned the abundance of outlets selling unhealthy food in the vicinity of the school. Other groups suggested that most parents had access to supermarkets or other large stores that did stock a wide range of food and drink.

She's buying like steak ... gammon steaks and... then she'd buy turkey and all that, the big meals so that we get healthier...

Well my dad started a few changes, my dad wants us all to go vegetarian in our family so he's buying wholemeal bread and organic stuff,... and he's put loads of exercise bikes in the house...

Focus Group 7, School 3 Primary 5 pupils

... two of mine are going to be veggies soon at this rate but they used to eat crisps until they were coming out their ears and coke and rubbish like that and I was the big bad guy... if I wasn't letting them have it,... you have to give in to them at some stage... but they don't want to know now and when they taste things that are loaded with artificial flavourings and sweeteners, it's a real shock to the system.

Joint Interview, School 3 Parents

... the apples and bananas at the lunch hall, they've made me more of a banana person 'cause I used to just eat apples all the time...

Now see when I drink water in school, sometimes I drink water in the hoose tae and I'd have about seven cups a day and

... I drink at home as well, I drink milk during the day but at night time I just drink water sometimes...

Focus Group 9, School 3 Primary 7 pupils

I don't think it costs more, junk food costs a lot of money. I was weighing it up with the fruit and veg, you can get fruit really reasonable now, especially in the fruit shops, I'm not saying the supermarkets but the actual fruit shops are great, their variety is great and their prices are great as well, you've just got to get out there and have a look and not just grab the first thing that's available, I think that's the problem as well... No, (problem) with availability, with Tesco and Asda...

Focus Group 19, School 5 Parents

4.8.2 No or limited evidence of influence on dietary habits outwith school

As has been mentioned, the response to the issue of impact on the home environment was far from consistent even within groups. Overall, a majority of the feedback received suggested that there was some evidence of change in dietary pattern related to schools initiatives, but a number of responses indicated that pupils' diets outside of the school gates had not altered. School 6 pupils and parents in particular reported that the poor quality fare they perceived as being available within school would not influence the attitudes or behaviours of pupils or parents towards healthy eating. Similarly, pupil respondents in other schools said that they consumed the same food and drink outside school since the initiatives started. It is important to note, though, that when they were asked to give more details of dietary consumption outwith school, examples of both healthy and unhealthy eating practices were given, suggesting that in some cases the school initiatives might not have represented a great change for all pupils and families.

As has been said, two of the parental groups in particular viewed the school initiatives as being a very positive occurrence, and also argued that they were helping alter the dietary practice of pupils and their families. However, these respondents also stated that it was unlikely that this view would be held universally by other parents, and that there was a group of parents who would be very resistant to change. Similarly, the issue of sustainability of any perceived dietary changes was a difficult one for the groups to address. Some of the parental respondents did think that tastes of children had changed and this had been maintained, but it was also viewed as being too early in the process to form a judgement.

As has been noted in the section above, the cost and availability of healthy food were not viewed as major stumbling blocks to developing healthier eating habits at home or outside of school. The major exception to this was the view that fast food outlets and vans were targeting secondary school pupils at lunchtime.

Yeah, 'cause if I have dinner at my house my mum always serves up something really nice like spaghetti or chicken or something and then I go to school the next day and for lunch I get a greasy piece of pizza or something, it's not in the slightest bit the same.

Because like on a Sunday my mum makes a three course meal right and then you go into the school the next day and you just think well if

our parents ... are making that, why can't they put in that little bit of more effort, I think they should put in more effort...

I eat a lot of junk food but I'm still healthy.

Focus Group 15, School 6 Secondary 1 pupils

HAS THAT MADE ANY DIFFERENCE TO WHAT YOU EAT WHEN YOU'RE AT HOME?

I don't eat any fruit unless it's in trifle.

Focus Group 9, School 3 Primary 7 pupils

I would say there's been an improvement I think for ... for half the population... but there's another whole group of people that just have a very different sort of view on it... And I think there's maybe a generation of parents that haven't really had much idea about... what's healthy and what's not or they haven't paid much heed to it so maybe if the children

Educate them..., from what they've learned in school.

Joint Interview, School 3 Parents

4.9 Suggested changes and improvements to schools initiatives

Both pupils and parents were asked what, if anything, they would change in relation to the various healthy eating initiatives within school. Most of the suggestions concerned the school meals service and the modifications called for included increasing the choices available to pupils, producing more of each option so that those classes at the end of the lunch sitting did not miss out, and allowing more unhealthy options to appear on the menu, an issue particularly raised by secondary pupils. However, both types of respondent in other groups, although predominantly groups representing primary schools, called for more healthy food to be served at school, with more vegetables and salads being requested, and a limit on certain unhealthy food types. Some of these responses did not relate to school dinners in isolation, there was a call for all drinks available within school to be healthy, for fizzy drinks to be banned within schools and for more fruit to be offered as part of the free scheme. Both parents and pupils expressed concern that school dinner halls were often small and schools might have to do more to stagger lunchtimes to allow all pupils to eat a lunch in a more relaxed environment.

Other modifications were also proposed in the group discussions. In two primary schools (Schools 2 and 4) it was said that tuck shops had been closed down or had altered the food and drink they had on offer, which provoked mixed views. The minority view seemed to be that these tuck shops should be re-established and allowed to sell more unhealthy options. A School 2 group also thought that the breakfast club should allow water to be used as part of toothbrushing rather than the

current dry brushing regime. Both parents and pupils thought that they could both be involved more in school initiatives. For example, parents asked for school packed lunch guides to be distributed and pupils in Schools 3 and 6 said that pupil surveys should be conducted to see what those consuming the food and drink within school thought of the initiatives and what modifications needed to be made. Tasting sessions for pupils and parents were also proposed. Finally, in one School 2 group the respondents argued that the initiatives were already operating exceptionally well, and that no modifications were necessary.

I know a girl in my class that every time there's pizza on she gets it but if you could actually just make it on a Friday it might change the way she eats at home and not always pizza and things like that.

I always ask my mum for a salad at home 'cause they're... healthy.

Focus Group 10, School 4 Primary 5 pupils

And usually the hot meal isnae that nice, it's like something you've never heard of before.

The pizzas are crispy, you cannae even chew into it.

They are like a brick wall.

SO WHAT OTHER CHOICES WOULD YOU LIKE TO SEE ON THERE THEN?

A mix between healthy stuff and unhealthy, just a mix.

Focus Group 14, School 5 Secondary 2 pupils

And they couldn't do like ... I know some schools they do an infant lunch break for 45 minutes from maybe quarter to 12 to half past and then half past to quarter past one for...upper school, so that there's slightly less of a pressure.

I know and then they're... it's the digestion of it as well really, it's no good for them to throw that down their throat and then go run and play...

You should take your time over food.

They can be associating food with rush.

Focus Group 18, School 4 Parents

Yeah,... because I'm on the Student Council and I think ... I'm going to bring up at the next thing, I think we should go round, have a poll/survey thing and it will say what would the students want rather than like the people that work there... want.

Focus Group 15, School 6 Secondary 1 pupils

4.10 Increasing the uptake of school meals

There was considerable overlap between responses to the issue of how to increase uptake of school meals and the issue of how to improve school-based dietary initiatives more generally. Therefore it was again suggested that if schools improved the quality of food on offer (with both more healthy and unhealthy options being called for by different groups), and prepared greater amounts for the whole school, more pupils would eat school lunches. Both pupils and parents thought that increased advertising of school lunches, at times allied with incentives and prizes for those taking healthy options, might increase uptake too. The advertising suggested included posters (already in place in some schools), newsletters and menus to the home, videos made of healthy versus unhealthy options and likely impact on an individual's health status and events such as taster sessions or health week activities within schools. In addition, some schools were reported to already offer incentives and prizes, such as I-pods, cinema tickets or 'house points', but the secondary school pupils and parent representatives in particular said that these schemes were unrealistic and were not currently increasing uptake in any meaningful way. In School 6 it was also claimed by parents that some pupils took healthy options in order to gain points, but then discarded the food and left the school to buy lunch from takeaways. A few pupil groups also thought that if the lunches were still healthy but the healthier elements were disguised it might attract more pupils to take school dinners.

The issue of banning pupils eating outside school provoked a wide response. The general consensus was that secondary school pupils in particular should be allowed to leave school at lunchtime as it would be an infringement of their rights if they were forced to stay within school, it was a rite of passage and pupils should be allowed more freedom at this age. In any case, school facilities were viewed as being inadequate to cope with larger school rolls. Also, given the negative reaction of secondary pupils to the food on offer within school it was felt that moves made by schools to restrict the movement of pupils would be very badly received. The primary school groups expressed mixed views. The pupils tended to think that it was a good idea – at present most of these schools allowed a few pupils to leave the school premises at lunchtime if they were going home or being picked up by parents – both pupils and parents stated that it would be safer for children to stay in school and arguably that they would be eating more healthy food too. Other primary pupils argued that schools should not have the right to stop older children from leaving the school, although it did not appear to be a very important issue for them at their stage of schooling.

The parents representing Schools 3 and 5 perceived that there was a case for banning both primary and secondary pupils from leaving the school at lunchtime. The major concern was that large amounts of pupils milled around shopping centres, car parks and roads, and that the environment could be unsafe. The School 5 group suggested that a partial restriction should operate, with either first and second year pupils restricted to the school during the day or different school years having access

to the shops outside on 3-4 days per week only. It was also felt in these parental groups that such a move would encourage healthier dietary habits in secondary pupils. In addition, both the School 5 and 6 parental groups expressed concern about the food being provided by vans and local shops at lunchtime, obviously targeting the pupil market, although they tended not to propose solutions to this issue. Finally, pupil groups in School 2 and the School 5 parental group reported that the schools were already doing more than enough to encourage school meal uptake.

Yeah, you could put up like 'buy more fruit' (posters), see you could put up things like the more fruit... that you could do a points thing and if the more fruit you get, you would get points and whoever had the most points by the end of the week would get something.

Like a prize.

Focus Group 1, School 1 Primary 5 pupils

No 'cause it's .. they need their own freedom at lunchtime, they're stuck in school all day so we should have a right to let us out.

Focus Group 14, School 5 Secondary 2 pupils

'Cause it's probably as well though if at primary you can't get out, once you're given an option then you know it's ...

You'll run a mile .

It's a bit like that after the October week when the first years.. they're all out that gate as soon as ... they're not staying in there to eat, they're all out that gate you know....

Focus Group 20, School 6 Parents

if they kept the first and second years in at lunchtime as well, just allowed the older kids to go out.

Or separated it, you know maybe two days a week you must go out ... you're allowed out, three you must stay in and alternate days in the canteen

And that would give them a chance to see what was on offer and they might find other things that they like there.

And it might no be as busy for them 'cause half might be away out whereas while they're staying in some classes might be out.

... I would rather she was kept in at lunchtime to be honest because I think the actual centre is a bit annoyed with the amount of school

kids that are actually in there as well because it's a big crowd of them away down there at lunchtime, they're all standing in queues...

I think there's too many places about the school, I think that's the problem, there's too main and I think they're aiming at the kids at lunchtimes, definitely the prices and things...

It is and they've got all the specials on and I think that's a big problem.

Focus Group 19, School 5 Parents

4.11 Ways to increase healthy eating outside of the school

Both parents and pupils were also asked to think of ways in which healthy eating might be encouraged outside of the school gates and, in particular, within the home. Although most groups were able to make some suggestions as to how this might be done, the consensus was that schools had to be very careful in attempting to extend influence into the home environment as many parents and children would view such approaches as unnecessary intrusion and beyond the remit of the school. This issue is explored in more detail below.

The major suggestions related to ways of involving parents and pupils more actively in the healthy eating initiatives promoted and encouraged within the schools. The most popular requests were for newsletters and menus (and in a few instances videos) to be sent home to inform parents about school initiatives, as well as for events such as taster sessions or cookery workshops for parents and/or pupils to be organised within the schools. It was acknowledged in some cases that such initiatives already had occurred, but had met with mixed success. For example, in School 5 the parents said that food had been set out for tasting during a parents' night, presumably to target as many parents as possible, but that it was the wrong time for such an event as the priority on such an evening was to get round all of the respective members of teaching staff. Also, although the majority view was that exposing more parents to the food on offer within school would help promote healthy eating, the School 6 pupils wanted their parents to taste the food in order to demonstrate how unpalatable it was. Still, the prevailing opinion tended to be that informing the parents of schools initiatives, as well as cookery workshops for parents perceived as lacking cooking skills might yield benefits outside school. Some respondents stated that their children should be involved in such events.

There was a call for more education about the benefits of healthy eating in school, especially within primary schools as it was reported that domestic science was no longer part of the primary school curriculum. Although it was acknowledged that secondary schools addressed dietary issues as part of home economics, both secondary school pupils and parents thought that there was room for extending such teaching into other areas, such as English, Personal and Social Education or PE. A few pupils also thought that there might be merit to make explicit links between sport or play and healthy eating. As has been mentioned previously, incentives and prizes were thought to have the potential to influence pupils' dietary consumption, but doubts were also expressed as to how useful such initiatives were. Finally, the School 6 pupils stated that there could be no influence from the school itself unless the quality of food and the variety on offer was addressed.

They could send letters to your parents like give them like a draft of the menu that you have.

They could like show your parents what you should be putting in your children's lunch boxes...

They could tell all the parents at parents' night 'cause that's just at the end of this month, what's in the school lunches and everything.

Maybe you could ask... some of the parents to maybe come down and see what kind of food the school are selling and to follow their example.

Focus Group 11, School 4 Primary 6 pupils

I think they should promote it more and let the parents know what healthy initiatives they're thinking about doing... that would be a good idea.

Or if they ran like workshops for healthy cooking, maybe they just don't know how to cook, I mean I don't and if you're on a low budget then convenience foods and all the fatty foods like burgers fill them up because at the end of the day fruit and veg do not fill children, especially adolescents...

WHAT ABOUT JOINT PUPIL/PARENTS CLASSES?

That might be an idea actually, that might be quite good.

Focus Group 20, School 6 parents

I think they should bring the parents in so the parents can see how bad quality the food is here rather than us .. like the school pupils going home saying it, saying 'oh right, it's really bad quality' without anybody else knowing that it's really bad.

Focus Group 15, School 6 Secondary 1 pupils

The last parents' evening that was here they had on show the meals that were available but it was really inconvenient because you're trying to see the teachers and by the time you do that you've no had a chance to go over and see what is on offer for the kids. I think that was the wrong time, they should maybe set aside a night to say 'right, this is what's on offer, how much it costs'... because this is a large school so they've got a lot to cater for as well.

But do you really believe that your kids would still stay in if you said ...

No I don't, I honestly don't...

Focus Group 19, School 5 parents

I think it should be like a topic in PSE, they talk about drugs and alcohol and bullying and things like that but I still think that maybe health should be a topic in PSE, make people more aware of like the dangers of not eating healthy and the advantages of eating healthy, I think that would probably ... if you gave them the hard facts that scared them a bit.

Yeah, but you get that in Home Economics, like about

You only get Home Economics for a wee while but you get PSE till you leave school.

Focus Group 16, School 6 Secondary 2 pupils

As has been said, some concern was expressed in relation to schools attempting to extend their influence beyond the school gates. It was stressed by both pupils and parents that the school did have an educational role, and within this it was perfectly acceptable for schools to seek to inform parents and families about health-related issues, but once people were in their own homes they were free to make their own choices. Similarly, a few of the parental respondents appeared to be quite sympathetic themselves to schools attempting to extend their role outwith the school gates, but this feeling was counterbalanced by the view that the majority of parents and carers would be resistant to, and might resent, such approaches. It was also argued that greater societal forces were at play in the home environment, which schools or schools initiatives would struggle to overcome. For example, the fact that there was a perceived culture now in which many parents had lost basic cooking skills and favoured preparing ready-made meals placed restrictions on the educational impact of school information campaigns or initiatives. Presumably, though, this is why respondents argued for cookery workshops for parents and pupils. In addition, parental respondents stated that school initiatives would come up against, and could not compete with, wider forces such as the power of big business, with its inflated advertising revenues. However, shops or vans targeting pupils with unhealthy options at lunchtime were perceived as being within the scope of the school, and a few parents said that schools has the right to ban unhealthy items being brought into the school from such outlets. Overall, though, the groups expressed reservations in terms of schools seeking to influence the home environment more directly, and thought that such attempts were likely to meet with some opposition from parents and families.

I don't think (the school) should.

No, 'cause you cannae boss our parents.

Focus Group 3, School 1 Primary 7 pupils

... it's a generational thing, I mean if you taught this next lot going through and if you had the facility in secondary schools it's the next generation again that's going to benefit from home cooking.

I don't think there was such a thing as a ready meal was there when we were wee?...

...all they can do is make the children aware of what's good for them.

You can't go home and knock on doors, you know, 'this is what you need to make'

That's right.

Focus Group 18, School 4 parents

No, at the end of the day it's the people's choice.

Focus Group 5, School 2 Primary 6 pupils

I think the schools are trying their best to educate the kids in healthy eating but I think it should come from the home because there's only so much they can teach them, if the parents aren't willing to put their foot down and say 'no you're no having this'...

I don't think they can, I mean I think probably this school is in a bad situation ...

I mean there must be at least four Chinese, at least, maybe even more in walking distance and as you say there's then .. I think there's one chip shop and there's ...

... and there's two bakers and a couple of cafés.

Focus Group 19, School 5 parents

4.12 Overall success of school initiatives

The respondents were asked to give their perceptions of the overall success of the dietary initiatives operating within the respective schools. The general consensus was that the schools initiatives had been at least quite successful. As has been mentioned, specific initiatives such as the free fruit scheme, breakfast services and the 'Refresh' water initiative attracted very little criticism, and were thought to have had a positive influence on pupils inside and outside of school. The school meal service, though, provoked a more varied response. On the whole, pupils and parents, especially those representing the primary school sector, reported that the lunches on offer were of good quality and were healthy, although there was some room for improvement. As might be expected, the secondary school respondents – especially the pupils – said that the meals were of poor quality, did not have enough variety and were unsuccessful in that pupil numbers taking school lunches had decreased. It should be noted that not all parents felt able to comment on the schools initiatives. Also, those respondents who stated that the school meals initiative had been

unsuccessful or had met with mixed success tended to say that more unhealthy options should be provided again.

I think it's successful because... they've really cut down on what they always used to sell.

... it's successful as well because ... you're getting more value for your money as well as getting healthy foods.

Focus Group 11, School 4 Primary 6 pupils

I tried a packed lunch once but I saw the others eating hot food and I went back to school dinner...

WHAT ABOUT THE FRUIT?

It's a good idea, you get apples, bananas, oranges, grapes.

It's good 'cause its healthy.

Focus Group 6, School 2 Primary 7 pupils

Well I think they have been a wee bit successful...?

...because well they've cut out fizzy juice and take X... who would maybe have Irn Bru if she could... would now have water because there's no Irn Bru from the vending machines, I think that probably has had an effect on a couple of people, not a majority but a minority...

Well, we've only been here for two years... but when I've been in I don't think they've been particularly successful.

Focus Group 16, School 6 Secondary 2 pupils

(the lunches are) no bad.

Sometimes they're honking but.

If it's pizza, hot dogs or burgers, then that's successful but if it's like tuna pasta or cheese rolls or something then 'no'.

Focus Group 9, School 3 Primary 7 pupils

4.13 Should healthy eating initiatives continue to run in schools?

Respondents in all of the groups thought that schools should continue to operate healthy eating initiatives. In the case of schemes such as free fruit and the 'Refresh' initiative in schools this was because they were viewed positively and attracted very little criticism. However, both pupils and parents tended to say that the school meals initiative should also continue. Those respondents who already perceived that the school meals were of good quality and relatively healthy said that they had already yielded health benefits and hoped that they would continue to offer similar fare in the future. Most of the respondents, secondary school pupils in the main, who felt that school lunches were tasteless and used poor quality ingredients still thought that it was worthwhile providing healthy options as it might have an influence on a minority of individuals. They went on to say that if more variety was provided, and unhealthy options were included on the menu on one or two occasions during the week, that they would attract greater pupil numbers to the lunch hall. The parents also argued that schools had to try to provide healthy options for the pupils, but it might be possible to increase the choices on offer at lunchtime. In one group it was also said that a van trading nearby the school at lunchtime and targeting the pupil market should be banned.

You can have a healthier life and most people have lunches now so most people are getting healthy

Yes, healthy food gives you energy not like when there was salt and pepper in everything that just made you feel bloated.

Focus Group 4, School 2 Primary 5 pupils

I think if they're going to keep it running they should add more flavours and let the kids pick what they want.

The problem is if you take out too much fat, salt..., you're actually losing out on the important vitamins which you actually need...

Focus Group 15, School 6 Secondary 1 pupils

Absolutely (the initiatives should continue),... the alternative is all the wrong things for all the wrong reasons.

Joint Interview, School 3 Parents

a small number of kids that do stick by it and they take the healthy option, ...but that's better than none...

Well if there is a problem with obesity in... Glasgow and the West of Scotland in particular, I think we've got to make some efforts...

I'd like to ban the van, it's a temptation for the kids.

Focus Group 20, School 6 Parents

5 SUMMARY AND DISCUSSION

This section summarises and considers the implications of the main findings of the research, especially in relation to the original aims and objectives of the research project.

5.1 Lunchtime eating practices at school

The quality of most packed lunches brought in to school was viewed as being unhealthy by pupils and parents. These lunches were said to be dominated by chocolate bars, sweets, crisps and fizzy drinks. Although a few of the participants said that packed lunches could be quite healthy, and allowed parents to know what their children were eating at school, the consensus was that packed lunches tended to be of rather dubious quality. Therefore, the participants suggested that one initiative schools might consider would be a packed lunch guide for parents.

5.2 Influences on uptake of healthy food and drink initiatives within school

There was evidence of an age effect in operation when the responses of different groups in relation to the quality of school lunches were looked at. This was illustrated most starkly when the secondary and primary school groups were compared. The secondary school respondents tended to be highly critical of the school meals on offer. They argued that the food was of poor quality, cheap ingredients were used, the meals were often very bland and tasteless, although criticisms were also raised that certain dishes were too spicy. As might be gathered from these responses, few of the secondary school pupils were regular users of the school meals' service. In two of the primary schools (Schools 1 and 3) the primary 5 pupils were much more positive about the standard of school meals when compared with their primary 7 counterparts. Indeed, the younger pupil respondents were more prone to argue that the food on offer could be made even healthier. The other two primary schools did not demonstrate the same age response pattern, with the groups all reflecting quite positive views of school lunches. Therefore, although some groups called for healthier options to be made available, the secondary pupils in particular wanted more unhealthy options to be included as part of the overall choice on a few days per week. They also argued that it should be possible for school meals to contain more salt and fat, and still not be considered as being unhealthy. It is possible that the responses in two of the primary schools demonstrate the beginning of the same process, which then becomes more evident in secondary school.

No clear pattern emerged when the influence of gender on lunchtime eating habits was examined. In a majority of groups the view was expressed that there was little difference between the eating behaviours of the girls and the boys. However, in one of the primary schools (School 4) the pupils perceived that boys preferred packed lunches as they could be consumed more quickly or in the playground, thus allowing more time for play. One of the secondary school groups in School 6 also reported that girls were more likely to take school lunches as they were more sensible about their dietary practice and more likely to reject 'junk' food. However, two of the School 3 primary groups argued that the reverse was true at that age, with girls preferring to consume unhealthy food and drink. It would be interesting to see if this mixed pattern

of response would still be observed if research were to be conducted in the upper years of secondary school, or whether similar views to those expressed by School 6 pupils would predominate.

The secondary school respondents were more likely to state that peer influence held sway in relation to eating behaviour during the school lunch break when compared with the views of the primary school pupils. The secondary school pupils indicated that they liked following the same practices as their friends, and clearly enjoyed the social aspects of the lunch break, often enjoyed outside school.

5.3 Barriers to taking school meals

The main reasons cited for pupils not taking school meals were that the food provided was not always of a decent standard, there was a lack of options available and those at the rear of the queues were left with an even more limited choice for lunch, especially as the amounts of food prepared were not viewed as being sufficient for all pupils.

Secondary school and parental respondents also stressed that the freedom given to pupils which allowed them to leave the school at lunchtime held great appeal, especially in the earlier secondary school years. Parents of secondary school pupils referred to this freedom as a rite of passage for the pupils, and one that arguably lost some of its appeal when they had been in secondary school for a few years. However, the general consensus was that the draw of the environment outside school with a number of shops and outlets offering food and drink, was a major factor in pupils rejecting school lunches in the first two secondary school years. Interestingly, respondents also noted that the environment was not always ideal outside school, with lengthy queues and a lack of space in specific outlets, but the new-found freedom afforded to pupils was thought to outweigh these potential disadvantages. If this is true, schools face a major challenge in increasing uptake of school meals in the first few secondary years in particular.

Pupils and parents themselves agreed that shops and vans in the proximity of the schools were targeting school children with meal deals, most often featuring unhealthy food, at relatively low prices. This seemed to be more of a concern for the parents; even though the pupils said that these deals were subjecting them to blatant advertising they tended to appreciate the cheap food and drinks on offer.

5.4 Factors assisting uptake of school meals

The respondents thought that school meals should provide greater choices again, a factor which has already been at least partly addressed by the addition of another meal choice. Those who requested the provision of a different type of lunch option were more prone to say that unhealthy options on the menu on one or two days per week, such as burgers hot dogs or chips, would attract greater pupil numbers. As has been noted already, though, other respondents, predominantly primary school pupils, wanted the school lunch menu to become even healthier. Of course, striking a balance in terms of preparing a school lunch menu when the demands of respondents are in such conflict would be difficult in practical terms for any agency.

Some of the primary school respondents thought that teaching staff could serve as good role models by eating with the children at lunchtime, or advising the children about the different choices on offer. Also, it was stated that links could be made

between the taught curriculum and the school lunch menu. However, secondary school pupils suggested that the presence of teaching staff in the lunch hall was likely to have an adverse effect and drive even more pupils outwith school as students would want time away from staff during school breaks. Again, this suggests that DACS and schools might have to adopt different approaches in primary and secondary schools if they want to increase school meal uptake.

5.5 Influence of school initiatives on dietary behaviour outwith school

Most respondents who offered a view thought that the healthy eating initiatives within school had made at least a modest impact on the eating behaviour of pupils outside of school, and a related effect on what parents were purchasing for the home. (This was not a majority of respondents overall as a number of participants felt unable to comment.) This influence was traced to the whole healthy eating agenda within Glasgow schools, and thus initiatives such as the free fruit scheme, the introduction of the 'Refresh' water initiative and the new school meals' service were all cited as having a positive influence on dietary patterns outside school. As a result, pupils and parents reported an increase in the purchase and consumption of fruit and vegetables, and a few groups also said that the preparation of new dishes (for the families in question) such as lasagne or spaghetti bolognese had taken place. A decrease in consumption of junk food and sugary and fizzy drinks was also reported by these respondents. Even allowing for the wider societal forces at play, it was argued that these changes had come about as a result of the school-based healthy eating programmes.

The parents who said that there had been a positive impact on healthy eating behaviour in the home spoke of their children accompanying them on shopping trips and directly influencing the food and drink bought for the home. Again, they tended to relate these choices to the exposure of the children to school-based programmes, and were appreciative of the schools enforcing the healthy eating message. It was also reported that it was relatively easy to prepare healthy meals with fresh food, and utilising ready made meals and take away food represented a false economy. Despite this, it was acknowledged that many families lacked basic cookery skills and society at large was favouring the use of processed food, take-aways and ready made meals. The cost of healthy food versus unhealthy food, as has been mentioned, provoked a mixed response. The respondents thought that there was a lack of consistency in pricing, and both healthy and unhealthy options varied widely in cost as a result. However, organic food was thought to be relatively expensive, and a few comments were elicited which suggested that less well-off families might not be able to afford the best quality food items.

Problems relating to the availability of, and accessibility to, healthy food and drinks in shops were not thought to present great difficulties to most parents. The research participants reported that large stores and supermarkets were sited in the vicinity of the schools and stocked a wide range of both healthy and unhealthy options. However, both parents and pupils spoke of shops, takeaway outlets and mobile vans targeting secondary school pupils at lunchtime. Most of the comments elicited suggested that these outlets were promoting special lunch offers dominated by unhealthy options.

School 2 and School 6 respondents tended to say that schools initiatives had made little difference. In the case of School 6 respondents this was due to the fact that the quality of food available in school was perceived as poor and so would only have adverse effects on eating patterns outwith school. School 2 pupils, and to some

extent participants representing other schools who thought that the influence on dietary practice outwith the school had been negligible, reported relatively healthy eating habits already. As a result it is possible that the healthy eating agenda being promoted in Glasgow schools did not always reflect a major change in dietary behaviour among the pupils and families concerned. However, it was also argued that there was a group of parents, characterised as being hard to reach and resistant to health-promoting messages, who would not be influenced by any school-based agenda. This group was also thought likely to lack basic cookery knowledge and skills. Hence, the view was expressed that cookery workshops and classes could be offered to address this perceived lack of skills.

The issue of the sustainability of perceived changes in dietary practice proved a difficult one for groups to answer. A few respondents stated that there was some evidence that such changes had been observed and had been maintained – the increase in fruit consumption was noted in this regard – but the general consensus was that it was too early to gauge longer term impact. Also, as has been mentioned above respondents were not always able to unpack wider cultural impacts on dietary practice. However, it was thought that school initiatives should continue as they had the capacity to impact on dietary practice for the better.

5.6 Restricting pupil access to the external school environment at lunchtime

The majority view of pupils and parents was that secondary school pupils should be allowed to leave the school at lunchtime. It was argued that pupils deserved a bit more freedom and responsibility at this age, the school did not have the right to restrict their movements at lunchtime and school facilities were often inadequate to cope with the whole school roll on the premises during breaks. As the secondary pupils were often scathing in their criticisms of the current standard of school meals, it was also thought likely to incite bad feeling and a possible backlash if staff restricted pupils to the school during the lunch break.

However, a few primary pupils and parents from a primary and secondary school (Schools 3 and 5) perceived that there was an argument for stopping secondary pupils leaving the school grounds at lunchtime. The main concern of these respondents tended to be one of safety; it was said that large groups of secondary school pupils roamed through shopping centres or gathered in dangerous environments, such as car parks or near busy roads. The School 5 parents were not arguing for a total ban, but suggested that either the first few secondary years only could be kept in school during the lunch break or different secondary years could have the right to leave the school only on certain days throughout the week. In this way it was said that pupils might try school lunches and would also not always be able to buy unhealthy options from shops and vans close to the school gates. How the secondary school pupils would react to even a partial ban is a good question; evidence from the School 5 and 6 pupil respondents themselves would suggest that it might antagonise the early secondary years. There is not enough evidence in this research to support a ban or partial ban on pupils leaving the school at lunchtime, and if such an approach is to be taken it would need careful consideration and arguably after the evaluation of a pilot scheme.

5.7 Involving parents and families in healthy eating initiatives

The general view expressed by parents and pupils was that schools should be very careful about attempting to exert a more direct influence on families in the home environment. Although there was limited support and some sympathy for the aims of extending the healthy eating agenda beyond the school, the consensus was that schools had a valid educational role but many parents would react against more active approaches to change diets in the home. It was stressed that people were free to make their own choices in their homes, although respondents also acknowledged that societal factors and the power of big business interests also influenced dietary practice. As a result, attempts by schools to inform pupils and parents of healthy eating initiatives within schools were thought to be worthwhile, but such approaches were still likely to be ignored or resisted by a core group of parents.

Vans targeting pupils with unhealthy meal options, though, were viewed as an issue that schools could address, although it is likely that council departments would have to be involved if restrictions were placed on such outlets. As has been said, cookery workshops and taster sessions could also be convened for parents and pupils, but the research suggests that DACS might have to use different approaches at different times of day to appeal to a broad group of parents, including parents' nights.

5.8 Perceptions of success of schools initiatives

Both pupils and parents were positive on the whole about the different components of the healthy eating initiatives within schools. The free fruit, breakfast service and the 'Refresh' water initiative were reported as being particularly successful, with few respondents making negative comments about their operation or impact, and few modifications being suggested to make them work better. Therefore, there was broad support for schools in Glasgow to continue their healthy eating programmes. Even those who criticised the current state of school meal provision thought that the move towards healthy school meals should continue as it still had the capacity to influence the dietary practice of a few pupils for the better. The research, though, suggests that DACS and schools have a very difficult job in overcoming the primary and early secondary school divide, with other factors likely to turn secondary school pupils away from the school lunch hall. Similarly, although there is evidence of the work of DACS impacting on the home environment, attempts to be more proactive in this regard have to be thought through very carefully, and are also likely to encounter significant resistance given other societal and cultural forces in operation.

6 CONCLUSIONS AND RECOMMENDATIONS

Both pupil and parental respondents perceived that schools initiatives such as provision of the breakfast service, the 'Refresh' water initiative and free fruit provision had been very successful. On the whole, the respondents thought that school meals were also of good quality, were relatively healthy and were quite appetising. The major criticisms of school meals were that the choice on offer was limited and the amounts prepared for a whole school needed to be increased. However, there was also a major difference observed between the responses of primary and secondary pupils. The secondary school respondents were often damning in their verdict of the quality of school meals, which they viewed as using cheap ingredients, and being bland and unappetising. Primary school pupils expressed much more positive views. Packed lunches were described by pupils and parents as tending to be full of fatty, sugary foods and fizzy drinks.

The main barriers identified to consuming school meals related to the quality of food on offer, almost always a secondary school concern, the lack of choice available and the school lunch hall environment, characterised as being cramped and dominated by long queues. In secondary school, the newly-afforded freedom of being allowed out the school gates at lunchtime, and to a lesser extent the influence of peers, were perceived as being an obstacle to school meal uptake. Therefore, it was stated that improving food quality and choice, as well as preparing amounts to cater for the whole school roll, might increase uptake of meals. Primary school respondents also thought that teaching staff being present in the lunch hall to monitor the environment, encourage pupils to try new options and to act as role models by eating their lunches with the pupils would also encourage uptake. Secondary school respondents expressed diametrically opposed views – they thought that the presence of teaching staff would have a detrimental effect on school meal consumption levels.

Improving the quality of school meals seemed to mean different things to primary and secondary pupils. In secondary school it tended to be allowing unhealthy options to feature on the menu on one to two days per week, whereas the primary school pupils were as likely to say that that unhealthy options should not be part of the school lunchtime menu at all. It was also argued that advertising of school meals, including taster events, as well as offering incentives and prizes for pupils, might increase school meal uptake. Making changes to the dinner hall environment or the pupil numbers accessing the facilities simultaneously were also thought to yield potential benefits. However, many schools had already adopted such measures, with limited, if any, success. Other school initiatives, such as breakfast services, free fruit and the 'Refresh' water initiative, were viewed very positively and were not thought to require major revision.

The general consensus was that secondary school pupils should be allowed to leave the school at lunchtime. It was argued that pupils deserved some freedom and responsibility at this age, the school did not have the right to restrict their movements at lunchtime and school facilities would struggle to cope with the whole school roll on the premises during breaks. In addition, as the secondary pupils often condemned the standard of school meals any move to restrict pupil access to the external school environment was thought likely to create a great deal of ill-feeling. A minority of respondents argued that there was a case for stopping secondary pupils leaving the school grounds at lunchtime for safety reasons. In one school the parental respondents suggested that a partial ban might operate, with either early secondary

years confined to the school during the day or different secondary years being allowed out at lunchtime only on certain days of the week. As well as increasing pupil safety it was hoped that pupils might try school lunches and might be less likely to buy unhealthy options from shops and vans outside of school. However, implementing a ban or partial ban would have to be considered very carefully, and would probably necessitate an evaluation of a pilot scheme before a policy recommending such an approach could be adopted in Glasgow.

Even allowing for other cultural trends evident in wider society, the majority of pupils and parents perceived that the school-based provision of healthy food and drinks had made at least a modest impact on dietary practice and parental consumer behaviour outside school. This impact was thought to be due to the whole healthy eating agenda within Glasgow schools, and thus the free fruit initiative, the introduction of the 'Refresh' water initiative and school meals were all said to have had a positive bearing on dietary behaviour outside school. As a result, pupils and parents reported an increase in the purchase and consumption of fruit and vegetables, as well as the preparation of new dishes such as lasagne or spaghetti bolognese. Drinking patterns were also said to have altered, with a decrease in consumption of sugary and fizzy drinks, and an increase in consumption of water, milk and fruit juice. In two of the six schools the respondents indicated that there was no evidence of an impact on eating behaviour outwith the school. In some of these cases, though, the dietary practice appeared to be relatively healthy already.

The general view expressed by parents and pupils was that DACS and schools should think very carefully before attempting to exert a more direct influence on families in the home environment. It was said to be prohibitively difficult to engage families more directly in an attempt to alter dietary behaviour for a number of reasons. Firstly, families were said to be free to do what they wanted in the home environment, although it was agreed that societal factors did influence their current dietary practice, and arguably these factors had more bearing on behaviour than the school agenda. Secondly, it was reported that schools were seen to have a valid educational role, which did encompass providing information to parents at times, but any school-sponsored initiative beyond this, targeted at the home, might cause resentment and resistance. Thirdly, the view was expressed that there was a group of parents described as being difficult to reach, and who were already resistant to information provision from the school. However, a few parents called for vans selling unhealthy options to pupils outwith the school gates to be banned, and for other local outlets to have their lunchtime offers monitored too.

Other ways of potentially increasing healthy eating outside of school included cookery workshops to be organised for parents and pupils, as many individuals were said to lack basic cookery skills. In addition, schools informing parents of menu choices and other healthy eating initiatives, such as healthy packed lunch ideas, were thought to be worthwhile. Also, a call for more links between healthy eating and the taught curriculum, such as domestic science teaching in primary school, and dietary issues to be taught outwith home economics in secondary school, was made. Incentives and prizes for pupils who made healthy choices was suggested. However, responses indicated that many of these ideas had been attempted before, and had not always been greatly successful.

The general consensus was that schools in Glasgow should continue their healthy eating programmes. Breakfast services, free fruit and the 'Refresh' water initiatives were thought to be particularly successful and attracted little criticism. Parents and pupils who rated the school meals' service highly wanted DACS and schools to

continue with the current approach, and in some cases to extend the range of healthy choices. It should be noted that even those who criticised the current state of school meal provision thought that the trend towards healthy school meals should continue as it still had the capacity to influence the dietary practice of a few pupils for the better. In addition, they also argued that the provision of a few unhealthy choices per week would also encourage pupil uptake of school meals.

Recommendations

- DACS and schools should continue to provide and promote healthy food and drinks within schools. Initiatives such as free fruit and access to fresh, chilled water were said to be very successful. This school-based provision was also considered by parents and pupils to be having a positive influence on the home environment.
- DACS and school staff should continue to monitor school-based provision. There was evidence in this research that certain lunch menu options were disliked and also the decrease in the number of menu options had been badly received. However, DACS has been aware of this and has acted upon such feedback.
- Packed lunches and snacks were said to be a cause of some concern. DACS and schools could consider producing and distributing a 'healthy packed lunch ideas' leaflet to the home, and schools could consider banning certain items, such as unhealthy snacks and fizzy/sugary drinks in the future.
- In order to increase uptake of school meals, different approaches are likely to be needed for primary and secondary school pupils. Primary pupils seem to favour the current school lunch approach, with only healthy options being provided, and also think that teaching staff have a role to play in promoting school meals uptake. Secondary pupils do not like current provision and favour having unhealthy options on the menu at times. DACS and schools should think of ways to engage with the early secondary school years more successfully in relation to the healthy eating agenda.
- There was only limited support for banning, or partially banning, secondary school pupils leaving the school premises at lunchtime in order to increase school meal uptake. Any attempts at introducing even a partial ban should be considered very carefully, and after consultation with the relevant school staff and pupils. As such a move might provoke a pupil and parental backlash, it might be worth considering a pilot scheme in a few schools first.
- Respondents reported that school-based healthy food and drink provision and promotion had made at least a modest impact on dietary practice outside school. However, beyond educational and information sharing initiatives, such as newsletters sent home, invitations to cookery and 'tasting' workshops, etc DACS and schools should not attempt to influence dietary practice in the home more actively as it is likely to lead to increase parental resistance and resentment.
- DACS and schools should raise the issue of vans and local shops targeting pupils with cheap, unhealthy meal options at lunchtime with the appropriate council department with licensing responsibilities. There might be a case for banning vans operating outside school gates in particular.
- DACS and the Education Department should continue to explore links between healthy eating and the curriculum, the use of school meal healthy choices incentives and prizes and ways of improving the school dinner hall environment.

This research suggests that DACS and schools themselves have a difficult job in overcoming the primary and early secondary school divide, in relation to retaining secondary school pupils as consumers of school lunches and as satisfied customers. Although there is evidence that DACS, the Education Department and other partners have successfully made a positive impact on the home environment, attempts to be more proactive in this regard have to be thought through very carefully, and are also likely to encounter significant resistance given other societal and cultural forces in operation.