

**Are Whole School Food Policies
implemented effectively in practice in
primary schools in the West Midlands?**

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Contents

1. Introduction/Background
 - 1.1 Obesity
 - 1.2 Food in Schools
 - 1.3 Whole School Food Policies
2. Literature review
 - 2.1 Inclusion criteria for studies
 - 2.2 Paucity of Relevant studies
 - 2.3 Background information
 - 2.4 Selected literature
 - 2.5 Review of studies found
3. Aims & Objectives
4. Methods
 - 4.1 Type of Study
 - 4.2 Setting
 - 4.3 Population & Sample size
 - 4.4 Preliminary steps
 - 4.5 Data collection
 - 4.6 Data Analysis
5. Results
 - 5.1 WSFP scoring: Control charts
 - 5.2 Demographics
 - 5.3 Data from school visits
 - 5.4 Supplementary data
 - 5.5 Details from questionnaire responses – Good practice
 - 5.6 Other issues
 - 5.7 Associations plotted with routinely collected data
6. Discussion
 - 6.1 WSFP scoring
 - 6.2 Demographics
 - 6.3 Quantitative data from school visits
 - 6.4 Changes children making
 - 6.5 School environment
 - 6.6 Other issues
 - 6.7 Associations with routinely collected data
7. Conclusions
8. Recommendations
9. Statement of Contributions
10. References

List of tables & figures

Tables	Figures
Table 1: Literature search results	Figure 1: Control chart 1: variation in WSFP scores between all 37 schools randomly selected
Table 2 - FSM eligibility	Figure 2: Control chart 2: variation in WSFP scores between 22 schools visited and variation in scores between 15 schools not visited. Including maximum score possible.
Table 3 - Ofsted inspection grade	Figure 3: FSM eligibility % vs Practice Score
Table 4 – Quantitative data from school visits	Figure 4: Ofsted score vs Average practice score
Table 5 - Scoring of each school visited	Figure 5: Practice Score vs Overweight or Obese percentage (Reception)
Table 6 - Changes Children/Young People are making to food choices across school day	Figure 6: Practice Score vs Overweight or Obese percentage (Year 6)
Table 7 - School Environment	Figure 7: Practice Score vs NCMP Participation percentage (Reception)
Table 8 - NCMP data: Overweight or Obese averages	Figure 8: Practice Score vs NCMP Participation percentage (Year 6)
	Figure 9: Practice Score vs FSM uptake

A Glossary of terms is included in Annex L.

Abstract

Background

Having a Whole School Food Policy (WSFP) is an important element of the Healthy Eating Theme to meet the criteria for National Healthy Schools status. A WSFP sets out a school's intention for practice concerning food across the whole school day. The number of schools reporting a WSFP has increased dramatically between 2005 and 2007, but little is known as to how effectively WSFPs are implemented in practice and whether this translates into improved food provision and environments in schools, changes in attitudes/behaviour and ultimately in improved health and well-being of the children.

Methods

An extraction was taken from the Healthy Schools database of all primary schools in the West Midlands who had self validated that they have a WSFP (n=747). A random 5% sample was taken from this population (n=37). WSFPs were requested from all 37 schools randomly selected and each one received was scored against a set list of criteria. The schools were invited, via the Local Healthy Schools Teams to take part in the research, 22 schools agreed to participate. A questionnaire was designed and carried out by the researchers in the 22 participating schools, with questions for the Head teacher, a Governor, Teachers, Pupils, Parents and the School Cook/Catering Manager. From the questionnaire responses and observation, the school was then scored based on its practice, post visit. The school environment and assessment of changes children were making across the school day were also reported on.

Results

The results showed that there was large variation between WSFPs in the 37 schools selected. Those schools who did not agree to participate in a visit generally had lower scoring WSFPs than those schools who did. In comparing the policy scoring of those schools visited, versus the practice scoring, overall practice was better than policy in all but three criteria, those being policy on sandwiches, clarity of the curriculum surrounding food and the presence of a cooking club. Issues were identified around engagement with parents over packed lunch policy. The majority of schools scored highly on their school environment, although there were concerns in a few schools around promotional materials, tuck shops meeting standards and the lunch menu being displayed. There were also some issues identified around procedures for the dining room environment. Particular areas of good practice were collected from several schools. No associations were found between higher practice scores and participation with the National Child Measurement Programme, Overweight or Obesity levels or Free School Meal uptake.

Conclusions

It was concluded that there should be some kind of standardisation of the content of WSFPs to reduce the variation between schools. In addition, schools should be engaged to ensure their good practice is reflected in their policy and represents the intentions and way forward for the school, in consultation with the whole school community. National, regional and local Healthy Schools Teams need to work together, and with schools, to develop a more standardised approach and to improve the moderation process, particularly to overcome the issues identified with self validation.

1. Introduction/Background

The key aim of a Whole School Food Policy (WSFP) is to develop healthy eating and drinking activities in a school to benefit pupils, staff, parents, caterers and others associated with the school¹.

WSFPs are developed in schools as criteria to meet the Healthy Eating theme of the National Healthy Schools Programme (a Department of Health funded scheme). A school will self validate on the Healthy Schools database that a WSFP is in place.

The minimum evidence required to qualify this is²:

- Parents/carers, governors and caterers and children/young people are/have been involved in policy development and can describe their involvement
- A policy is available covering all aspects of food and drink at school, including appropriate curriculum links, reference to policy regarding packed lunches/food brought into the school and children/young people going off-site to purchase food
- The policy is referred to in the school prospectus/profile
- The policy is regularly communicated to the entire school community
- The policy and its impact are reviewed on an ongoing basis to reflect current DCSF standards.
- Children/young people and parents/carers are involved in guiding the School's Food Policy and can describe their involvement

- Children/young people and parents/carers agree that their feedback relating to policy has been appropriately considered.

This evidence is expected, to show that a WSFP has been developed, but little is known as to how effectively the policy is implemented in practice and whether this translates into improved food provision in schools, changes in attitudes/behaviour and ultimately in improved health and well-being of the children.

1.1 Obesity

Tackling obesity is a national priority. In July 2004 a Public Service Agreement (PSA) target was set to ‘... (halt) the year-on-year rise in obesity among children under 11 by 2010 in the context of a broader strategy to tackle obesity in the population as a whole’³. In October 2007 this was superseded by a broader long-term ambition with an initial focus on children: ‘By 2020, we aim to reduce the proportion of overweight and obese children to 2000 levels’⁴. As part of the NHS Operational plans 2008/09-2010/11 the ‘vital signs’ indicator is to reduce obesity in primary school children: a national priority for local delivery⁵. The Foresight report (2007) ‘Tackling Obesities: future choices’ has taken a strategic overview of the issue of obesity. By 2050 the Foresight modelling indicates about 25% of children under 16 could be obese⁶.

Childhood obesity is an important issue in the West Midlands region. 19.9% of children (aged 2-15) in the West Midlands are obese, the second highest

rate of childhood obesity in England after London. The West Midlands has the highest rate of obese children aged 11-15 (24.3%) in England⁷.

1.2 Food in Schools

As part of a multi-faceted approach to tackling obesity, the Healthy Eating and Food in Schools agenda and related policy has undergone huge change in the last three years:

- The School Food Trust (SFT)⁸ has been established with the aims to: ensure that all schools meet the relevant standards for lunch and non-lunch by recommended timeframes; to reduce diet related inequalities in childhood; to increase the uptake of school meals (up 4% by March 2008 and 10% by September 2009) and to improve food skills through food education and school and community initiatives. The SFT has launched their 'Million Meals' campaign to achieve this target⁹.
- Transforming School Food: New standards for school food (led by the School Food Trust) have been introduced covering food not only served at lunch times¹⁰ but across the whole school day¹¹. All schools must now offer healthier (better balanced) choices at lunchtime. Food served in school at other times of the school day, for example in breakfast clubs, tuck-shops and vending machines also had to meet the standards by September 2007.
- Healthy Schools Programme: The new Healthy Schools status involves schools having completed the Healthy Eating theme, including having a WSFP, and includes pupil and parent involvement in all aspects of the

development and implementation of healthy food throughout the school day¹².

- Food in Schools programme: The Department of Health introduced a Food in Schools Programme in 2005 which looks at food across the school day and produced a Food in Schools toolkit for schools to support developing food in schools activities in line with healthy eating criteria of the National Healthy Schools Programme¹³.
- Other relevant policy: Every Child Matters 'Be Healthy' Theme¹⁴; Choosing Health 'Choosing a Better Diet'¹⁵; Year of Food and Farming¹⁶.
- The National Child Measurement Programme (NCMP): established in 2005, is run jointly by DH and DCSF. Children in Reception and Year 6 are weighed and measured during the school year to inform local planning and delivery of children's services and to gather population-level surveillance data to allow analysis of trends in growth patterns and obesity¹⁷.

1.3 Whole School Food Policies

The Food in Schools toolkit states that: 'A Whole School Food Policy is a shared, evolving document for all stakeholders that interact with (a) school. It expresses a common vision of the ethos, status and role of all aspects of food... In particular it aims to develop a coherent approach to healthy eating activities in (the) school'¹⁸. Considerations should include:

- the school environment and equipment, kitchens and dining facilities
- provision of food at school e.g. breakfast clubs, tuck shop, school lunch, vending, water consumption and use of food as a reward

- consumption of food at school e.g. eating environment, service style, length of breaks, litter, pupils bringing food to schools, packed lunches (including information to parents)
- involvement of all school staff through a School Nutrition Action Group or School Council or Healthy Schools Task Group
- whether the children should be allowed to leave the premises during the school day (not an issue for primary schools)
- food content, nutritional standards and sourcing of ingredients
- training and development for catering staff
- any issues relating to commercial food vans
- food education across the curriculum
- extra curricular activities e.g. cookery club, growing club
- using the school grounds to grow fruit and vegetables
- participation in national events and initiatives e.g. National Healthy Schools Programme, Growing Schools, Food Partnerships, Food for Life
- events and letting at school e.g. school fete
- pastoral care and welfare issues e.g. behaviour, free school meals take-up
- involving children in decision making for school meals, trialling new products, and designing menus through curriculum activity

Developing a WSFP is part of the wider 'Whole School Approach'¹⁹ taken by Healthy Schools.

The objectives of the Healthy Eating theme (of the Healthy Schools Programme) are to demonstrate that:

- Healthy Eating contributes significantly to the 'Being Healthy' national outcome for children
- Children/young people have the confidence, skills, knowledge and understanding to make healthy food choices
- Healthy and nutritious food and drink is available across the whole school day.

Although the last of these points may be committed to by producing a policy document, its effective implementation and sustainability needs to be monitored. The outcomes for and knowledge and skills of children cannot be demonstrated via a policy alone, but needs constant monitoring and assessment to justify. This has not been investigated.

In order to assess the effectiveness of the Food in Schools Programme within the West Midlands region, a baseline measure of 'Food in Schools Activity' was undertaken in 2005 by the West Midlands Food in Schools team, using a postal questionnaire sent to all primary schools²⁰. This process was repeated in 2007. Results showed a 107% increase in the number of primary schools in the region reporting a WSFP: 62% in 2007 compared to 30% in 2005. This survey showed that schools seemed to be taking the establishment of a WSFP seriously as a criterion to gain Healthy Schools status, but did not indicate the quality of the policy or how it was implemented to develop and sustain good practice around healthy eating.

Based on the Food in Schools survey, which followed up primary schools after 2 years, and with the time and capacity available, it was decided to focus on primary schools for this project. If successful, future work could be carried out to roll this research out to secondary and special schools in the region.

Due to the importance of the obesity and the food in schools agenda, it was decided to carry out this project to ascertain whether the WSFP are being implemented effectively in practice in primary schools or whether the WSFP criteria on the Healthy Schools database is being self-validated largely as a vehicle for meeting the Healthy Schools standard, without policy being transferred into practice.

This research has clear public health relevance to the obesity and food in schools agendas which are long term government priorities.

2. Literature review

The purpose of the literature review was to:

- a. identify similar studies
- b. gather relevant background information to inform this study

2.1 Inclusion criteria for studies

Inclusion criteria were developed to sort papers found in the literature search.

The inclusion criteria were:

1. Mention in the title or abstract of school food policy/policies
and
2. Mention in the title or abstract of implementation or impact (of school food policy/policies).

Papers found, that met the inclusion criteria were divided into three categories:

1. Relevant studies that would form the basis of the review.
2. Papers that gave background information.
3. Those that on further consideration were excluded.

A break down of all these papers is included in Table 1.

Details of the Literature search process and strategy are included in Annex A.

2.2 Paucity of Relevant studies

The literature search yielded few relevant studies; this accords with the experience of others and what was expected by the experts consulted. It also

accords with the recognised need for the study as a result of the Food in Schools survey carried out by the West Midlands Food in Schools team, which identified that little was known about the quality and impact of WSFPs and how they are implemented and developed.

2.3 Background information

Background reading was undertaken on the various guidance documents available on the development of Whole School Food Policies and school food standards:

- 'Establishing a Whole School Food Policy' from the Food in Schools Toolkit is a guide to help schools develop, write and implement a WSFP. It outlines the benefits of a WSFP, the aim and objectives and includes a step-by-step plan of development and implementation. It supports the whole school approach set out in the Healthy Schools programme.
- The School Food Trust School Food Checklist²¹ helps schools assess whether the food and drink they provide throughout the school day meet the food based standards, including food provision at breakfast, mid morning break, tuck shops, vending and after school clubs. It has been developed in consultation with professional catering staff across the country to help transform school food.
- The Food in Schools Toolkit²² provides a wide range of guidance, resources and interactive tools to help schools take a whole school approach to healthy eating and drinking. It covers healthier breakfast clubs, healthier cookery clubs, healthier lunch boxes, growing clubs, dining

room environment, water provision, healthier tuck shops and healthy vending machines.

- Food Policy in Schools: A Strategic Policy Framework for Governing Bodies²³ is a guide for school governing bodies, through the steps necessary to adopt a strategic approach to food policy in schools. It provides case studies to share good practice and illustrate good practice and lessons learnt from schools that have 'successfully implemented a WSFP'.
- British Nutrition Foundation 'Establishing a Whole School Food Policy: Bringing together messages about food throughout the school day'²⁴ was a guide to help schools develop, write and implement a WSFP. It has been developed upon and superseded by the 'Establishing a Whole School Food Policy' guide detailed above.
- Grab 5! 'A model school food policy- a practical guide'²⁵ Outlines the benefits of introducing a school food policy, and provides a specimen policy for adoption by the school governors, together with a comprehensive list of ideas for shaping and developing a school food policy.
- Food for Life Partnership 'Develop a whole school food policy'²⁶ gives guidance on developing a WSFP, action plan and school nutrition action group to influence the health of students and the whole school community. It includes practical information and an action plan template to implement a policy.
- The Teaching Expertise website provides an article 'Developing a whole-school food policy'²⁷ which gives links and guidance for teachers on

developing a WSFP and understanding the latest standards for school food.

- Birmingham City Council Health Education Unit have produced guidance and evaluation documents on School Nutrition Action Groups, which provided the grounding for the whole school approach to nutrition and Whole School Food Policies^{28, 29, 30}.
- The Ofsted report on encouraging healthier eating in schools³¹ evaluates the progress schools are making in meeting the new food standards and identify successful strategies to help pupils and families understand healthy eating. It provides examples of specific strategies used by the schools visited, including cashless catering systems, reviews of pupils' diets and cross-curricular approaches to developing understanding about healthy eating. It makes recommendations for schools, particularly about school meals and dining areas, partnerships with families, and the role of the curriculum in giving children and young people both practical experience of preparing food and consistent messages about healthy eating.
- The Food In Schools website provides a page on 'Whole school food policy'³² outlining its status, role and purpose in schools.

There were also eight papers found in the systematic literature search which were excluded, but relevant as background reading on:

- Local School Wellness Policies (USA)^{33, 34}
- proposals for and experiences with different school food policies^{35, 36}
- effective school interventions³⁷

- the impact of food on children’s behaviour³⁸
- recommendations for children’s healthy eating and government initiatives³⁹
- changes to school food and the reasons for them⁴⁰.

2.4 Selected literature

Table 1 - Literature search results

	Refs found	Selected on abstract	Read and then excluded	Included as background reading	Included in review
Lit search	678	19	5	8	6
From study references	2	2	2	0	2
Grey Lit (Google search/Email to networks/Experts)	50	-	-	14	0
Total	730	21	7	22	8

2.5 Review of studies found

Eight papers were selected to form the literature review, having fulfilled all inclusion criteria. A data extraction form for each included paper is included in Annex B, which gives more details and specifically more information on the internal and external validity of each study.

Paper 1: ‘School food policy at primary and secondary schools in Belgium-Flanders: does it influence young people’s food habits?’⁴¹.

The paper aims to describe the availability of food items at primary and secondary schools in Belgium-Flanders and to examine the influence of school food policy and socio-economic status (SES) on the consumption of various food items. Data was collected via a survey and then around 10 months later a short school policy questionnaire was sent to the same

schools. They found that most primary schools had written rules to restrict the consumption of snacks and most of the rest had an informal policy. Perhaps as a result of this, there was no significant between-school variation in primary schools, but considerable variation between secondary schools in the consumption of soft drinks, sweets and crisps. They found that this could not be accounted for by individual factors alone, meaning that schools (and the school environment) do influence consumption, although regarding fruit, they found this was not the case. They discuss how at primary school level, availability and accessibility of foods at home and parental attitudes may be more influential. They found that both the pupils SES and the SES to which they are exposed is an important factor. Pupils with lower SES were more likely to consume unhealthy snacks.

The study clearly differs from this research in that it takes place in Belgium-Flanders. Although it includes primary schools, it is only 11-12 year olds and because of the results, looks more closely at secondary schools. It looks at the influence of school food policies on consumption and lists school food policies as the availability of food, rules and nutritional education programs, whereas WSFPs in the UK ask schools to develop healthy eating and drinking activities across the whole school day to benefit the whole school community. They also looked at the influence of SES, used independent student variables and the teacher as the data collector, none of which was done by this research. They do admit that an interview format for the questionnaire may have generated a more differentiated and complete picture of the school food policy, which is a strength of this study. They recommend

that schools should create school food policies by which issues concerning food availability and all-food related activity in schools can be tackled.

*Paper 2: 'Measuring the 'obesogenic' food environment in New Zealand primary schools'*⁴².

The study aimed to identify and measure the obesogenic elements of the school environment and the canteen sales of energy-dense food and drinks. The data was collected via a self-completed questionnaire to assess each school's nutrition environment. They found (relevant to this research) that only 16.5% of schools had a food policy, but of those 91% rated the policy as effective or very effective in promoting healthy eating. This research only looks at schools that already have a WSFP. They also found high availability of high fat items and low support for healthy food choices and that 'less healthy' dominated due to convenience. This is less likely to happen in the UK as there are now school food standards that outline what food can be served in schools and policies which look at food provided throughout the whole school day.

The study differs to this research in that it takes place in New Zealand. Although the study started looking at both primary and secondary schools, due to the low response rate from secondary schools, they only used primary schools in the analysis; children aged 5-10 years old, which fits with the age profile of this research. The study mainly looked at sales as an indication of the influence environment has on obesity, but it does have key sections and recommendations regarding school food policies. They highlight the urgent need to promote 'healthy food policies'. They found that the presence or

absence of a food policy was an important but crude indicator of the food environment and that the assessment of the level of effectiveness of the policy was very subjective as no definition of effectiveness was given. For those schools with a food policy, the focus was on the school food service. They recommend that more comprehensive policies linking the curriculum, food service, school and parents may achieve a greater impact.

*Paper 3: 'Exploring changes in middle-school student lunch consumption after local school service policy modifications'*⁴³.

The study assessed the impact of school food policy on student lunch consumption in middle schools. Data was collected via student self-assessment food records and purchasing information. They found that consumption of sweetened beverages decreased, and consumption of milk, calcium, vitamin A, saturated fat and sodium increased. The statistically significant results were the decrease in consumption of snack chips (crisps) and the increase in consumption of ice cream, which the authors felt might be the effect of substituting one snack for another. There was also an increase in vending machines as a source of candy (sweets) and snack chips (crisps) and an increase in the number of vending machines in schools. They concluded that the observable changes show that environmental changes can lead to changes in dietary behaviour, but that this is needed in all environments or efforts will be wasted. This point seems to justify the UK approach of a WSFP where food is considered across the whole school day in all environments.

The study differs to this research in that it takes place in the USA and looks at the impact of school food policy changes on lunch consumption. The

school food policy changes are those implemented by the Food Service Director to remove snack bars from all schools, rather than being introduced by the school themselves after consultation, as is expected of a WSFP in the UK. The study involves middle school children, grades 6-8, only the 6th grade of which would be relevant to primary schools in the UK (aged 10-11).

Paper 4: 'Texas School Food Policy Changes Related to Middle School a la Carte/Snack Foods: Potential Savings in Kilocalories'⁴⁴.

The study assessed the potential impact of a school food policy change reducing sweetened beverage and high-fat, salty, and sweet food portions on the energy consumption of middle school children. They found that reducing portion size resulted in saving 47kcal per student on a daily basis, equivalent to 2lb over the school year if everything else remains equal. The study is based in the USA, which has much bigger concerns than the UK about obesity and therefore reducing portion size (they state that about 49% of eighth grade students in Houston schools were over the 85th percentile for weight). The study focuses on middle school students, 6th-8th grade, which similar to the previous study has little age overlap with UK primary schools. The school food policy changes referred to in the study are state wide rather than school changes. They also look at the school food policy changes to portion size and its impact on energy balance (and so weight management), rather than the impact of a school food policy across the school day. The study does however talk about the importance of encouraging and supporting efforts to improve school food environments.

*Paper 5: 'Nutrition policy, food and drinks at school and after school care'*⁴⁵.

The study set out to describe food and drinks available in food stands or canteen at Danish schools and food and drink provided at after school institutions in Denmark. Data was collected via a self-administered postal questionnaire. They found (relevant to this research) that only 3% of schools and 4% of after school institutions had a written food policy, they note that this is much lower than other countries studies on school food policy presence. They acknowledge that compared to many other countries, the prevalence of obesity in Denmark is low (although the rate of increase among young adults is alarming). This research is only looking at schools that have a WSFP. The study differs to this research in that it looks at Danish schools, children aged 6-15 (grades 1-10) as Denmark has no primary/secondary system; this research only looks at primary schools. Only the head teacher was asked to complete the questionnaire (although in some cases other members of staff completed it), so there was no consultation with pupils or other members of the school community. They also looked at after school institutions, which is not relevant to this research.

*Paper 6: 'Competitive food initiatives in schools and overweight in children: a review of the evidence'*⁴⁶.

The paper reviewed the literature on school policies and programmes that address competitive foods (junk foods), high in sugar or fat and provide minimal nutritive value. They found that the sale of junk foods often competes with more nutritious school lunch programs. They also found that policies to reduce competitive food can be effective and even increase food revenue.

The study clearly differs from this research in that it looks at US studies and focuses on schools in Wisconsin, USA. It is concerned with the impact of competitive foods, which are a big issue in the US, as these foods do not have to achieve the same standards as the US National School Lunch Program meals. The study is concerned with the impact of school food policies on reducing the consumption of junk food and the impact on nutrition, rather than how they are implemented and the impact on the whole school environment.

Paper 7: 'School food policies and practices: a state-wide survey of secondary school principals'⁴⁷.

The study aims to describe food related policies and practices in secondary schools in Minnesota. Data was collected via a mailed anonymous survey. They found that 65% of principals believed it was important to have a school food policy, but only 32% actually had a school food policy. This research looks only at those schools that have a WSFP.

The study differs to this research as it is USA based and looks at secondary schools, whereas this research studies only primary schools in the UK. It is relevant however in that it looks at the difference between policy and practice and scores the policy and the actual practice in the presence and absence of various elements; similar to how this research assessed the policies before the school visit and then after the visit assessed (scored) the observed practice and school environment.

The authors recommend schools should develop and implement comprehensive school food policies 'to foster an environment supportive of healthful food choices' and that policy development may be best done with

nutrition advisory groups (similar to SNAGs in the UK) or school health councils which include school staff, parents and community members. This is similar to the consultation and development recommended for WSFPs in the UK.

*Paper 8: 'Food Environment in Secondary Schools: A La Carte, Vending Machines and Food Policies and Practices'*⁴⁸.

The study describes the food environment in 20 Minnesota secondary schools. Data was collected via food inventory and surveys to school Principals and Food Service Directors (FSDs). They found (relevant to this research) that few schools had school food policies, although there were differences in views between Principals and FSDs and inconsistency in reporting responsibility for the school food policy. 5.9% of Principals reported their school had a food or nutrition policy, whereas 27.8% of FSDs reported the same. 61.1% of principals and 21.1% of FSDs reported FSDs were involved in setting school food policy. 16.7% of Principals and 5.3% of FSDs reported Principals involvement in the process. 50% of Principals reported only healthy foods should be provided at schools, 31% of FSDs held the same view.

Differences to this research are those similar to the previous study, it was based in US secondary schools, whereas this research studies only UK primary schools. The study is mostly interested in food availability and the 'food environment' whereas this research looks at the differences between the policy and the practice throughout the whole school environment.

The authors discuss how school food policies are not given enough priority in the secondary school environment and recommend that they need increased attention. They also acknowledge that US schools are often reliant on the revenue from 'competitive foods' to fund the food service and other important school activities and that school food policies can affect the availability and marketing of food and beverages, so alternative revenue streams need to be found. This is not an issue in UK schools.

All the papers included in the literature review discussed school food policies and their impact in various ways, although none of the studies were from the UK, which would have made them more generalisable to this research. In addition, none of them were looking specifically at Whole School Food Policies (exclusive to the UK) but more often at policies on school meals or policies implemented by a school food service. All the studies argue for the importance of School Food Policies to strategically direct the work of the school, and for the importance of improving the school food environment, but none of them look into whether school food policies are effectively implemented in practice.

3. Aims & Objectives

Aim: to assess whether Whole School Food Policies (WSFPs) in primary schools in the West Midlands region (WM) are implemented effectively in practice, to determine whether they have an impact on health and wellbeing and to make recommendations for further work in this area.

Objectives:

- to carry out a questionnaire to determine if WSFPs are implemented effectively in practice in primary schools in the WM
- to use routinely collected data and questionnaire results to establish whether WSFPs have an impact on health and wellbeing
- to identify, share and celebrate examples of good practice to be used to inform further development work
- to identify areas for further support and development.

4. Methods

4.1 Type of Study

Descriptive study

4.2 Setting

Primary Schools in the West Midlands listed as having a WSFP on the Healthy Schools database (via self-validation). 747 schools identified.

4.3 Population & Sample size

Random sample of 5% of schools (n= 37) across the West Midlands who are listed as having a WSFP. At no point in this study are any of the individual schools identified.

4.4 Preliminary steps

In October 2007 a Focus Group set up by the Regional School Food and Health Coordinator (members of Focus Group listed in Annex C) met, to scope out the methodology and agree the project lead. This group then became a 'virtual' group to provide advice as required.

A letter was sent to all local Healthy Schools co-ordinators in November 2007, outlining the purpose of the research and asking them to respond to indicate willingness to be involved. The letter was signed by the Regional Healthy Schools Co-ordinator and the Regional School Food and Health Co-ordinator (see Annex D). A follow up phone call to each recipient was also carried out, to organise visits to discuss the study.

An extraction was taken from the Healthy Schools website of all primary schools in the West Midlands region that had self-validated that they have a Whole School Food Policy. This brought up 747 schools.

A random 5% sample of these schools was taken (n= 37) using the Microsoft Excel random sampling tool.

In December 2007, visits were undertaken by the Project Lead and the Regional School Food and Health Co-ordinator, to all the local Healthy Schools co-ordinators involved in the random sample (12) to discuss the process and most importantly how the visits would be carried out; as a result 9 Healthy Schools co-coordinators/teams agreed to be involved. A letter was composed for them to send to the schools selected explaining the research and asking them to be involved, as well as requesting a copy of their WSFP and a timetable for the visit. At the request of the local Healthy Schools teams concerned, the Dudley and Coventry schools were approached by the Project Lead.

On visiting the Worcestershire Healthy Schools team, it was discovered that Worcestershire schools were under represented in the sample as they still run a first and middle school system rather than a primary school system. It was decided however not to change the sample, as it was too late to re sample and contact new schools.

To encourage and thank schools for their participation, the Regional School Food and Health Co-ordinator offered each school who accepted a visit, up to £55 of Food in Schools resources of their choice.

4.5 Data collection

An interview-based questionnaire was designed to be carried out in the schools selected. The outcomes are based on those used by the Healthy Schools programme⁴⁹, which originate from Kirkpatrick's model of measuring⁵⁰. Five themes (and supporting Effectiveness criteria) were mapped out by the Project lead, in conjunction with the Regional School Food and Health Co-ordinator, to support the questionnaire: Curriculum, Food Provision, Involvement, Training and Leadership. These link to the considerations required for a WSFP mentioned in the introduction. The questionnaire included questions for Head teacher/Governor, School Cook/Catering Manager, Pupils, Parents and Teachers. It also included a section on the school environment based on the observation of the data collectors. The mapping for the questionnaire, including outcomes and effectiveness criteria, is attached as Annex E.

In December 2007 the questionnaire was piloted by the researchers in two schools from a Local Authority area not involved in the random sample (Wolverhampton); the visit was led by the Wolverhampton Healthy Schools Food lead. This led to changes being made to the questionnaire, most notably splitting the questions for the Head teacher and Governor. The final questionnaire is attached as Annex F.

Visits to schools were undertaken between January and March 2008 to carry out the questionnaire (most led by HS co-coordinators/team members. For the two Dudley visits, one was led by the Regional Food in Schools Co-ordinator, one was led by the Project Lead). Two sessional workers employed by the Regional School Food and Health Co-ordinator recorded questionnaire responses. Individual feedback on the findings from the visits were sent to each of the schools who participated at the beginning of April, along with thank you cards for their participation. The school feedback template is attached as Annex G.

Information was also collected on the demographics of all 37 schools randomly selected, from the most recent Ofsted inspection reports. The reports varied in inspection date from 2004-2008. This gave information on variation in terms of size of school, ethnic mix, eligibility for Free School Meals (used as an indicator of deprivation) and the Ofsted inspection grade (an overall marker of the quality of the school). The Ofsted inspection reports vary in their format in that there is no standard information given on free school meals numbers, instead the inspector makes comments on the size and demographics of the school and sometimes numbers are stated. A judgement was therefore made on the basis of these comments, as to whether eligibility for free school meals was above average, average or below average. Free School Meal (FSM) eligibility data was also obtained from LA Catering Services, the two sets of data were compared and where there was not a correlation, the Catering data was used rather than the Ofsted data as it

was more up to date and reliable. The number eligible for FSM in Primary Schools in England is 15.9%⁵¹; looking at the range of FSM eligibility across the 22 schools, they were therefore put into three categories: 5% either side of 15.9% were counted as being 'average' for FSM eligibility, above or below this was above or below average. The inspection report also gives each school an inspection grade: 1= Outstanding, 2= Good, 3= Satisfactory, 4=Inadequate. The demographics of the 22 schools visited were also plotted against the practice score data (see figures 3-4).

4.6 Data Analysis

A checklist was constructed, to quantitatively assess each school's WSFP before the visit and then quantitatively assess the same information post visit (practice), based on questionnaire responses and observation of the school environment. Six of the criteria used were just used for the content of the WSFP and not assessed post visit as they were not relevant. Complete checklist headings are included in Annex H. The checklist is based upon one used by Wolverhampton Healthy Schools team, who have a proven, robust system of keeping track of the development and standard of WSFPs in their area. This data allowed quantitative description of the theory of the WSFP versus the practice observed.

An 'Essential' or 'Desirable' marking was assigned to each checklist item to enable scoring of the WSFPs received from both the schools who accepted visits and those that did not. Essential criteria were worth double that of Desirable. A control chart was plotted to ascertain if there was a difference in

quality of the WSFPs between the schools visited and those not visited (see Figures 1 and 2).

As the project was also work related (Department of Health West Midlands), West Midlands Public Health Observatory were consulted, to access the National Child Measurement Program (NCMP) data at a school level (overweight and obesity levels and participation levels and regional and national averages). This was used to plot and indicate a possible association between schools who have effectively implemented a WSFP and engagement with the NCMP.

Free School Meal (FSM) data at a school level was also obtained, in order to plot and indicate a possible association between schools who have effectively implemented a WSFP and encouraging those children entitled to FSMs to eat a meal at school. The FSM data was accessed from Catering Services in each Local Authority.

Two sessional workers collected the responses to the questions during the visits and there was some variation in collection between them. There was also some variation in how questions are asked between the different healthy schools workers leading the questionnaires in the different Local Authority areas. The sessional workers also 'scored' the practice (the same 'Essential' and Desirable' criteria as with pre-visit data, minus six criteria only relevant to WSFPs) once they had completed the visit (what is here on referred to as the 'Practice score').

There was concern that there may have been some bias involved, in that those who did not accept a visit may have less well-developed WSFPs. Policies were therefore requested from those 15 schools in order to plot a control chart of variation, to identify if there was any significant variation between the WSFPs of those schools we visited and those we did not. It was decided in discussion with the Regional School Food & Health Co-ordinator that we would expect an 'Outstanding' school to meet 13 Essential and 8 Desirable criteria, giving a score of 34.

5. Results

Out of the 37 schools randomly selected from the Healthy Schools database, 22 agreed to take part in the visit and interview based questionnaire (59%). Those that declined to take part (either the schools themselves or the Healthy Schools co-ordinators) did so mostly on the grounds of other pressures, that they said meant they felt unable to give the time.

Requests for WSFPs from those 15 schools who did not agree to a visit, resulted in 13 responses and 12 WSFPs received. One school responded to say that they do not have a WSFP, but that healthy eating and a healthy lifestyle is integrated across Personal Health and Social Education and other programme areas within the curriculum (this is discussed later). Two schools did not respond to the request and when the Regional School Food & Health Co-ordinator contacted them to chase them up, she was informed that again they did not have a WSFP. One of these schools later contacted the Regional School Food & Health Co-ordinator to say they had found the WSFP, but this was too late to be included in the research data.

5.1 WSFP scoring: Control charts

Further information on the theory and interpretation of control charts is included in Annex I.

The first control chart (Control chart 1 – Figure 1) plots the variation in WSFP scores between all 37 schools randomly selected, both those who accepted a visit and those we did not. It reveals large variation between the schools

WSFPs. It shows that none of the schools are within special cause variation (above or below the control limits: 3 standard deviations from the mean); all are within common cause variation. There are more schools not visited below the mean, but none are below the control limits. As there is such variation between the scores however, the lower control limit is set at 0.5, which is an impossibly low score for a WSFP. For the second control chart plotted therefore (Control chart 2 – Figure 2), just the variation between the schools visited was included, and the scores of those schools not visited was plotted on top of this. This shows that the WSFP of one school is below the lower control limit and therefore within special cause variation. In this second control chart, a line has also been included to show where the maximum score possible would lie (43); this is below the upper control limit, but again due to the large variation between the scores, no WSFP can reach the upper control limits (being 49.7 and 49.5 in each control chart, respectively). In both charts, four schools achieved the ‘outstanding’ score of 34 or above. The highest score that was achieved was 41 (a school that agreed to a visit), meeting 13 essential and 15 Desirable criteria. WSFP scores of all 37 schools selected are included in Annex J.

Figure 1 - Control Chart 1: variation in WSFP scores between all 37 schools randomly selected

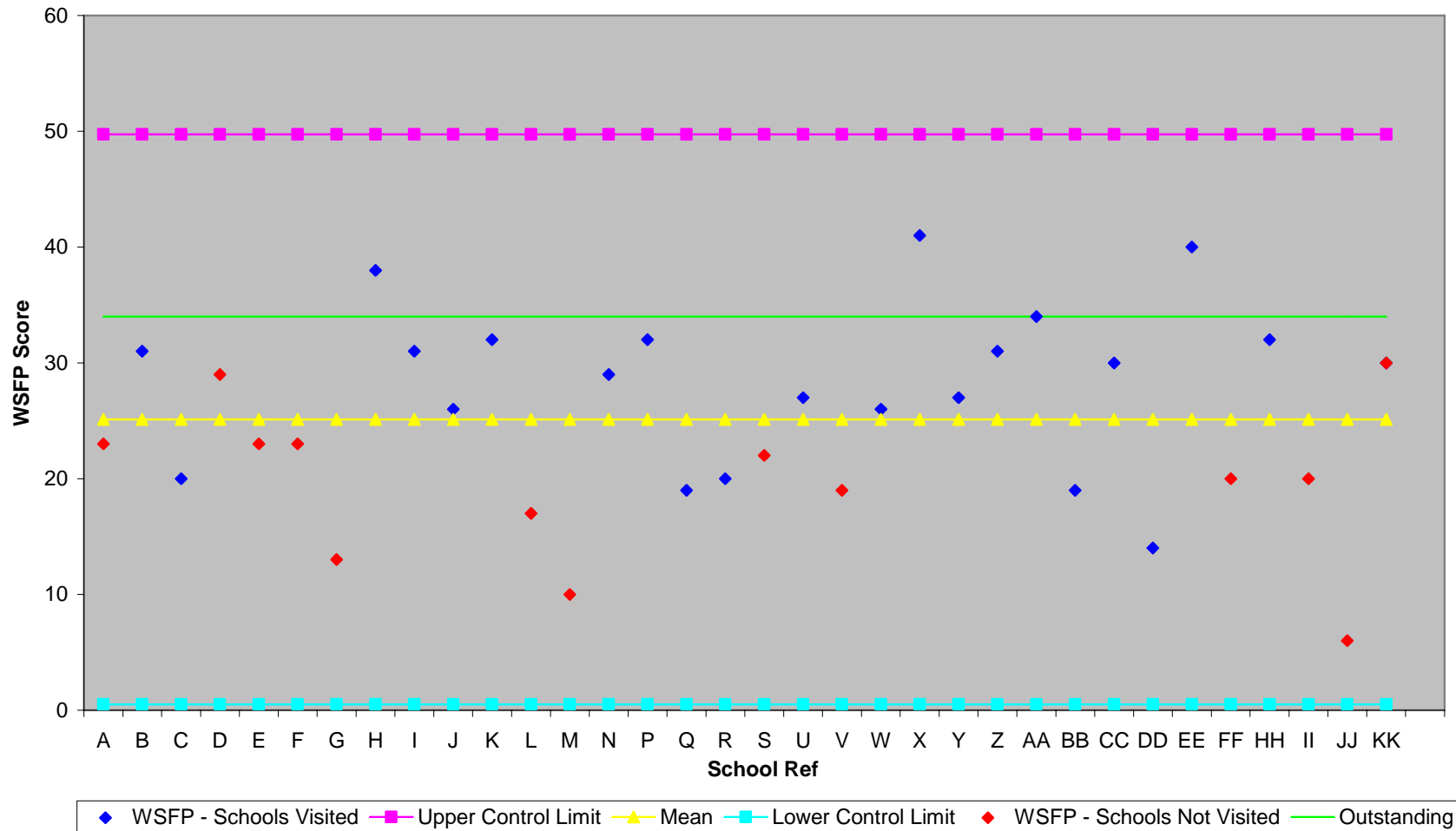
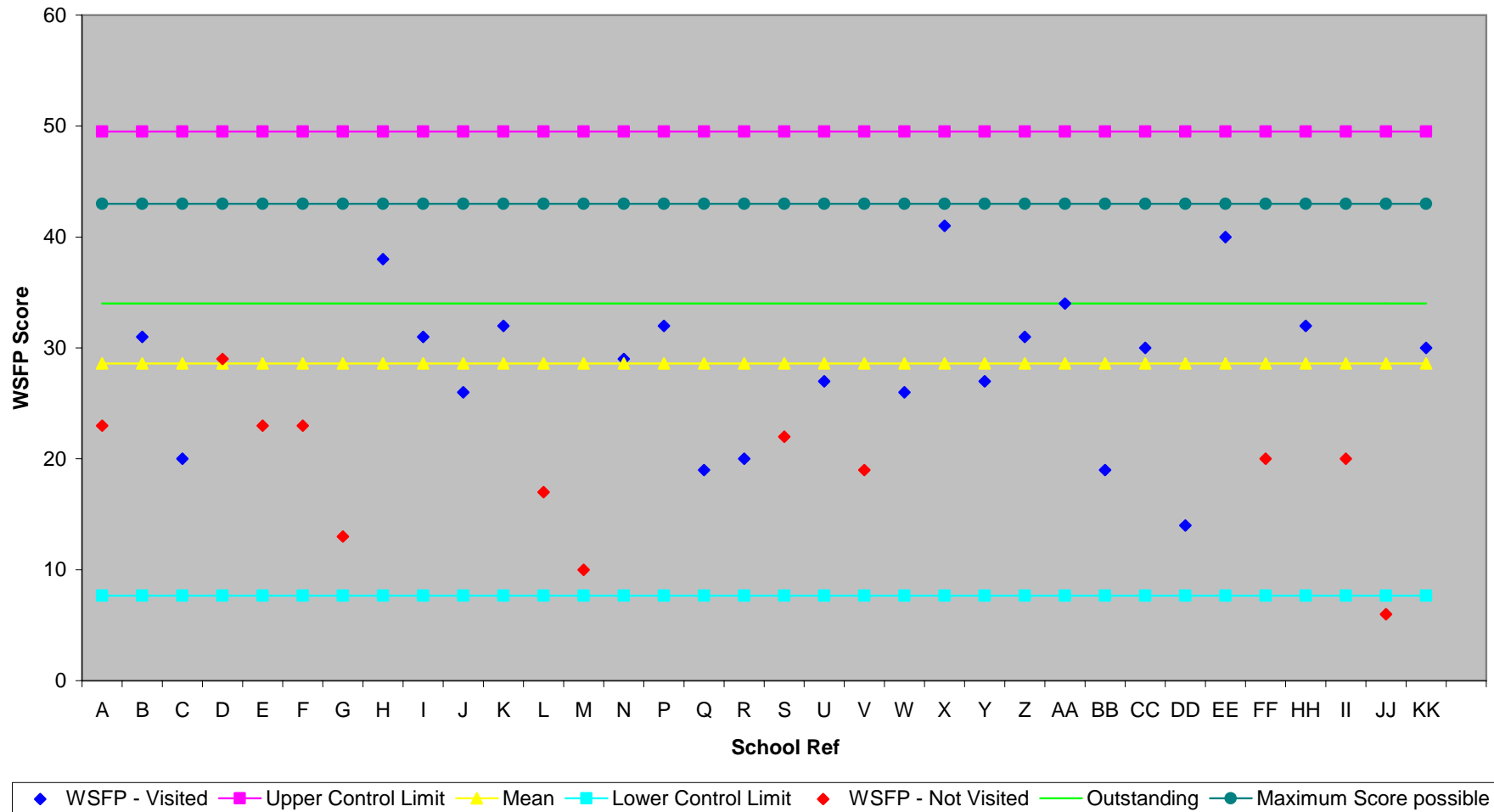


Figure 2 - Control Chart 2: variation in WSFP scores between 22 schools visited and variation in WSFP scores between 15 schools not visited. Including maximum score possible.



5.2 Demographics

Table 2 - FSM eligibility

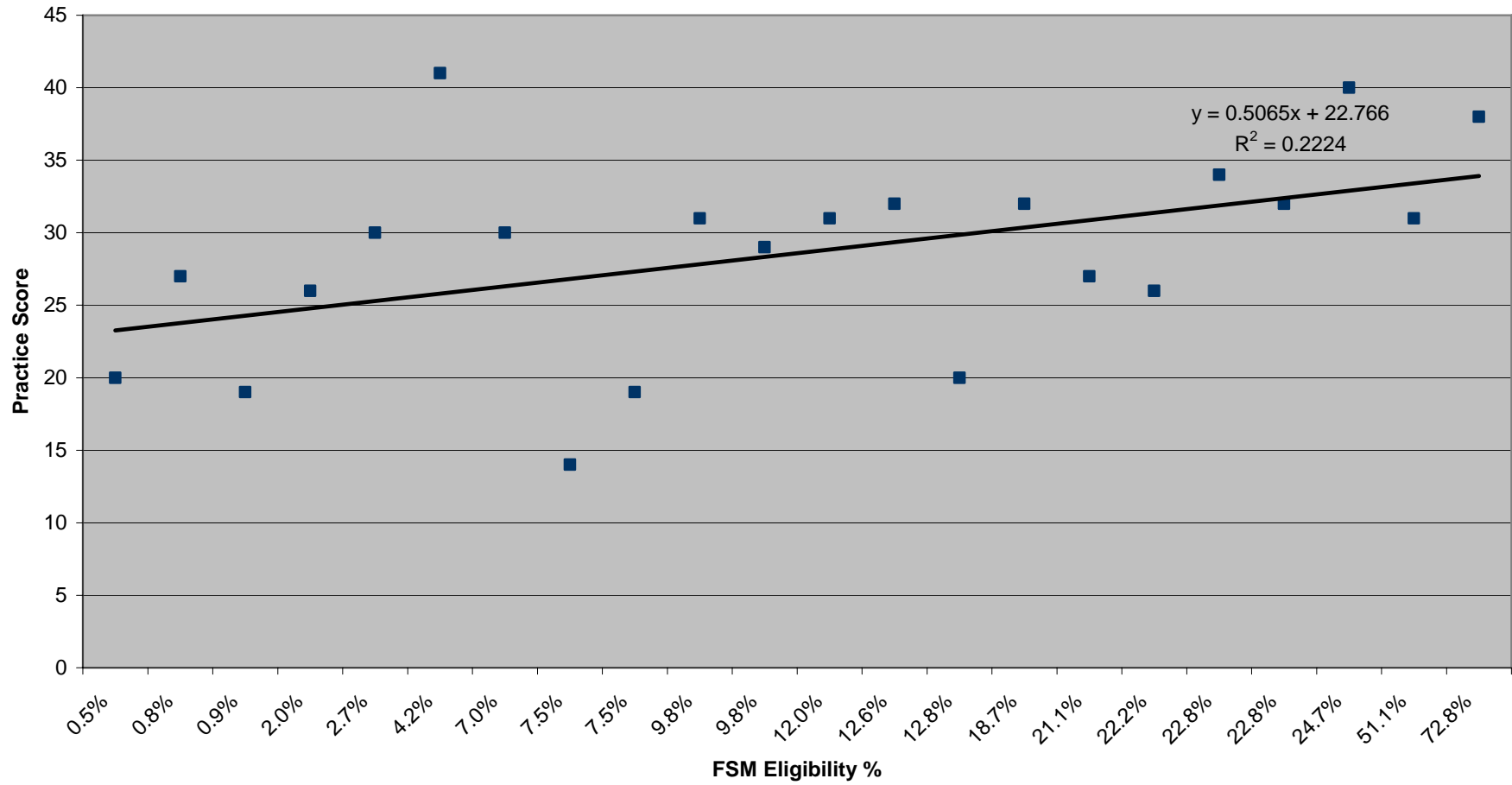
	BELOW average	AVERAGE	ABOVE average
Random sample (n=37)	15 (41%)	8 (22%)	14 (38%)
Schools visited (n=22)	11 (50%)	4 (18%)	7 (32%)

Table 3 - Ofsted inspection grade

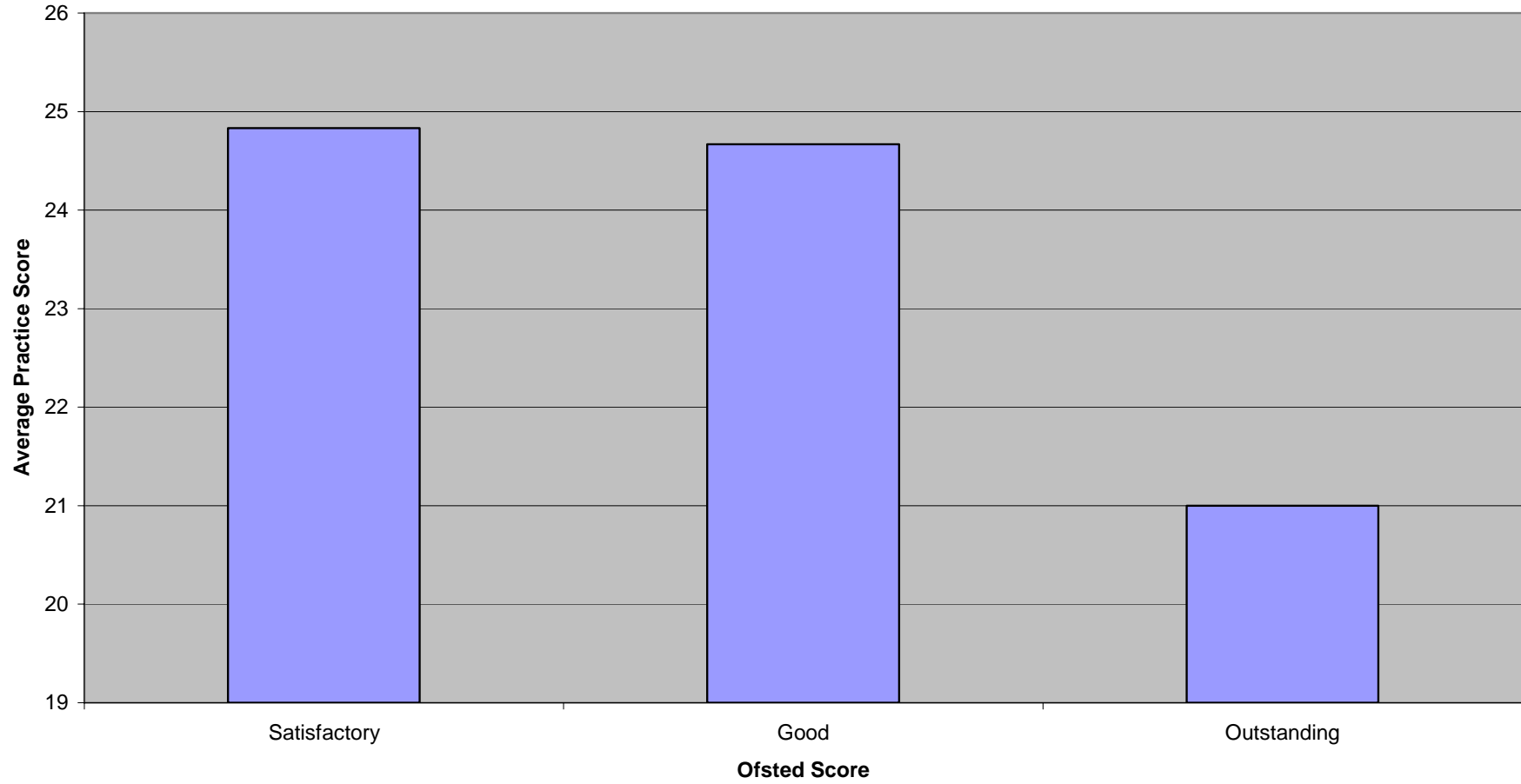
	OUTSTANDING	GOOD	SATISFACTORY
Random sample (n=37)	1 (3%)	20 (54%)	16 (43%)
Schools visited (n=22)	1 (5%)	9 (41%)	12 (55%)

The demographics of the 22 schools visited were also plotted against the practice score data (Figures 3-4). This data does not show a significant association or correlation, perhaps due to the very small numbers ($n < 20$). In Figure 3 the correlation between the FSM Eligibility of a school and their practice score is $R_2 = 0.2$, which is weak.

Figure 3 - FSM Eligibility % vs Practice Score
n=22



**Figure 4 - Ofsted score vs Average Practice Score
n=22**



5.3 Data from school visits

Table 4 – Quantitative data from school visits

	<i>Theory</i>	<i>Practice</i>	
Question posed (number of schools = 22)	Mentioned in WSFP?	From Questionnaire/ Observation	Difference
Did they have a consultation process? (Essential)	73%	100%	+27%
Are responsibilities clear? (E)	82%	86%	+5%
Are there reward systems in place? (Desirable)	32%	59%	+27%
Are the needs of allergies, vegetarians, religions met? (E)	50%	95%	+45%
Is there a breakfast club? (D)	45%	64%	+18%
Is there a tuck shop? (D)	36%	41%	+5%
Do they have Healthy Snacks? (E)	86%	95%	+9%
Is there a Free School Fruit and Vegetable Scheme? (D)	64%	100%	+36%
Is (free) Fruit & Vegetables provided for KS2? (D)	14%	18%	+5%
Is water freely available? (D)	95%	100%	+5%
Do they provide milk? (D)	55%	82%	+27%
Is there a policy on packed lunches? (D)	64%	41%	-23%
Is there a policy on hot lunches? (D)	81%	100%	+19%
Is there lunch time supervisor support? (D)	59%	95%	+36%
Do the lunch time supervisors monitor food consumption? (D)	50%	91%	+41%
Is the curriculum concerning food clear? (E)	100%	91%	-9%
Is there a cookery club? (D)	45%	41%	-5%
Is there a growing club? (D)	27%	59%	+32%
Do they meet standards for school lunch? (E)	77%	100%	+23%
Do they meet standards for food other than lunch? (E)	82%	82%	-
Is CPD/Training provided for:			
Staff? (D)	55%	68%	+14%
Parents? (D)	27%	45%	+18%
Catering? (Usually provided by catering firm). (D)	36%	90%	+54%
Is there involvement of outside agencies? (D)	41%	82%	+41%

Table 5 - Scoring of each school visited

School	WSFP score	WSFP score minus 6 criteria not applicable to practice	Practice Score
B	31	21	23
C	20	12	23
H	38	26	30
I	31	19	26
J	26	18	25
K	32	24	30
N	29	17	20
P	32	24	25
Q	19	11	22
R	20	12	25
U	27	17	27
W	26	16	22
X	41	29	28
Y	27	21	27
Z	31	21	24
AA	34	24	27
BB	19	13	26
CC	30	22	21
DD	14	8	20
EE	40	28	23
HH	32	20	25
KK	30	18	22

5.4 Supplementary data

Table 6 - Changes Children/Young People are making to food choices across school day (from questionnaire responses)

	Head teacher	Governor	Teacher	Average
Making Healthier Choices?	82%	77%	82%	80%
Improved attitudes towards healthier food?	77%	64%	73%	71%
Improved knowledge and eating behaviour?	64%	36%	59%	53%
Improved behaviour?	14%	14%	36%	21%

Table 7 - School Environment (from observation)

Question	Yes
Are there Nutritional Promotional Materials?	77%
Are there attractive eating environments?	100%
Does the tuck shop food meet standards?	67%
Is the lunch menu displayed?	76%

Do the food choices reflect the menu?	100%
Is there enough room to sit?	100%
Does lunch time food meet the standards?	100%

5.5 Details from questionnaire responses – Good practice

General good practice picked up in some/several schools:

- Good, healthy tuck shops
- Parents and Grandparents lunchtime sessions
- Tasting sessions for parents and/or children
- Health weeks: a week of health related themes and activities
- Healthy lunchbox sessions for children and/or parents
- Cooking demonstrations with parents and children – some run by Catering Services
- Reward systems: a sticker system for children eating all their school meal, a competition for those eating school dinners (a magic number on the bottom of plates), a smoothie-making reward for the quietest table of the week
- Information provided on school food at parents' evenings
- Golden table on Friday when supervisors choose children to sit with the head teacher at lunchtime
- Golden time once a week when children who have behaved well can choose an activity, many choose to do cookery
- Christmas meals: parents attending, teachers serving – teachers felt they should do this more often as children really liked it.
- Themed school meal days organised by Catering Services e.g. Chinese, Brazil days

- Good displays and promotional material creating an attractive environment and encouraging a healthy lifestyle
- Cooking and/or Growing clubs offered as part of after school or holiday clubs
- Good pre-ordering systems – Where there was a daily rather than a weekly payment system for school meals parents and children liked it as allows flexibility and prevents wastage
- Where schools have round or hexagonal tables they are popular as they are more sociable and create a family environment.

Particular good practice in certain schools:

- School I: provides free toast for all pupils first thing in the morning
- School KK: focused their Healthy Schools and Eco schools work on healthy lunchboxes: the school council took the lead, they ran a survey, encouraged less packaged food and ran their own assembly
- School AA: run a progressive reward system for eating fruit and vegetables as part of the school meal, the healthy eating 'Lunch bunch' ladder
- School AA: enabled parents to create menus and meal planning as part of ICT
- School C: The head teacher eats with the children everyday.
- School C: They offer sandwiches as a school meal option in order to provide more choice

- School C: There is an excellent relationship with the school cook, who jointly wrote the WSFP and regularly adds extra things to the school food menu
- School Y: provide new parents with an information pack which includes nutritional considerations about school food
- School HH: Have 'family dining' where the children have lunch as a 'family' and older children take responsibility
- School J: The Head teacher helps serve lunch to take pressure off the school cook
- School H: As the school is in a very deprived area, the school have invested to ensure there has been no price increase in school meals for 2 years
- School Q: Friday 'try day' when children are given a new option at breakfast club.

5.6 Other issues

- One school said that they felt that as they were not in a deprived area, they were not seen as a priority for outside agencies to work with
- Many schools said that school meal uptake had gone down since the new standards for school lunch were introduced (maybe as a result of the focus on how bad things were), but now the numbers are increasing, as the younger children "don't know any different"
- One teacher commented that the price for teachers meals was expensive, discouraging them from sitting and eating with the children.

5.7 Associations plotted with routinely collected data

The schools' practice score was plotted against the NCMP data: obesity and overweight levels and participation, in both Reception year and Year 6 (see Figures 5-8), all show very or extremely weak correlation. Some further explanation of the NCMP data dataset is included in Annex K. For Reception Year, data for 9 (41%) of the schools visited was available and for Year 6, data for 14 (64%) of the schools was available. Data was suppressed by WMPHO due to either small numbers, <70% participation, <20 children measured or due to a data error.

Table 8 - NCMP data: Overweight or Obese averages

	Reception	Year 6
Regional average	23.7%	33.3%
National average	22.9%	31.6%
Schools visited average (for which data is available)	35.8% (n=9)	33.1% (n=14)

The FSM data accessed from Local Authority Catering Services was used to plot an association between the schools' practice score and the FSM uptake in the school (see Figure 9), again which shows extremely weak correlation ($R_2 = 0.0027$).

Figure 5 - Practice Score versus Overweight or Obese Percentage (Reception)

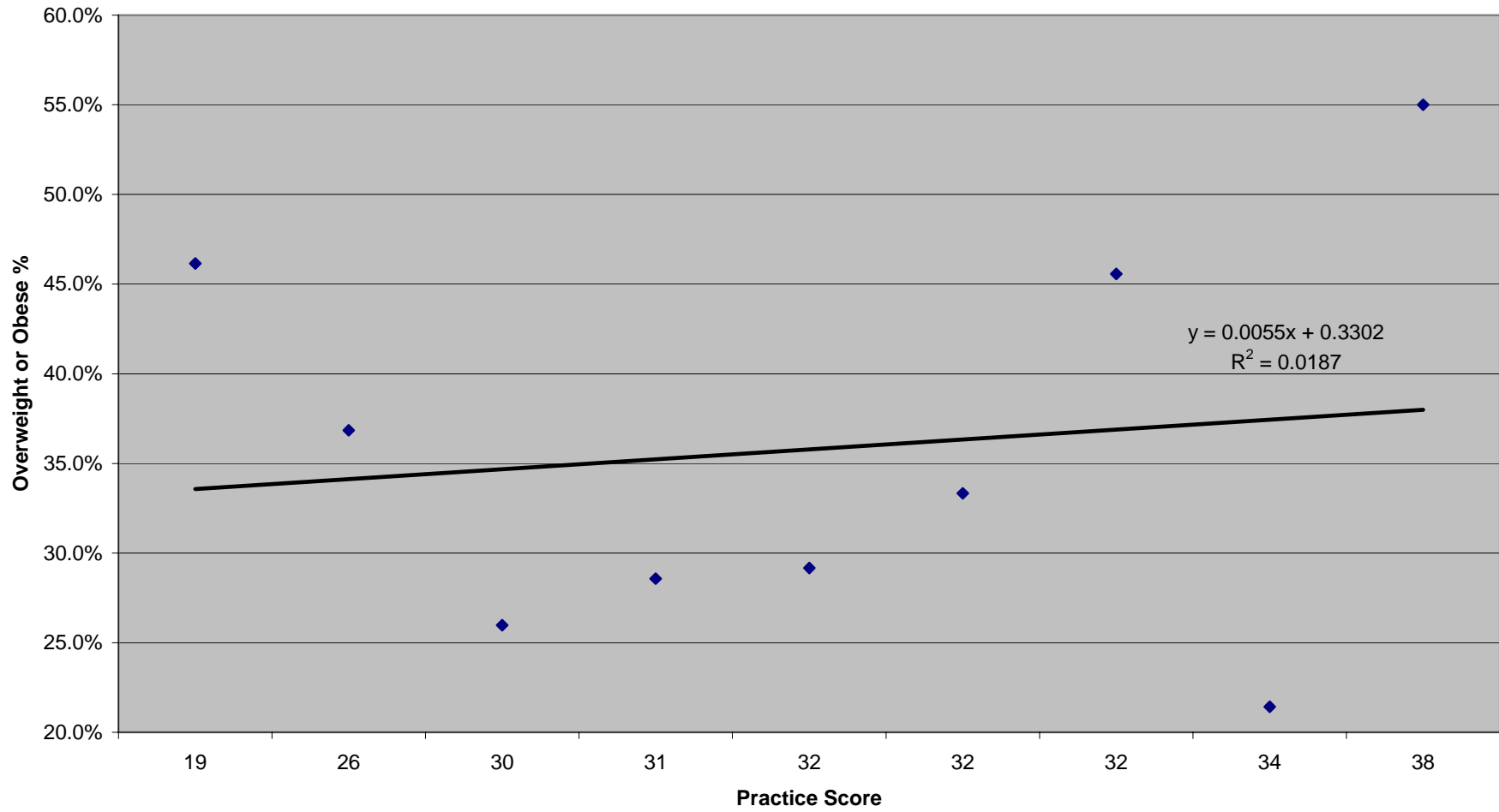


Figure 6 - Practice Score vs Overweight or Obese Percentage (Year 6)

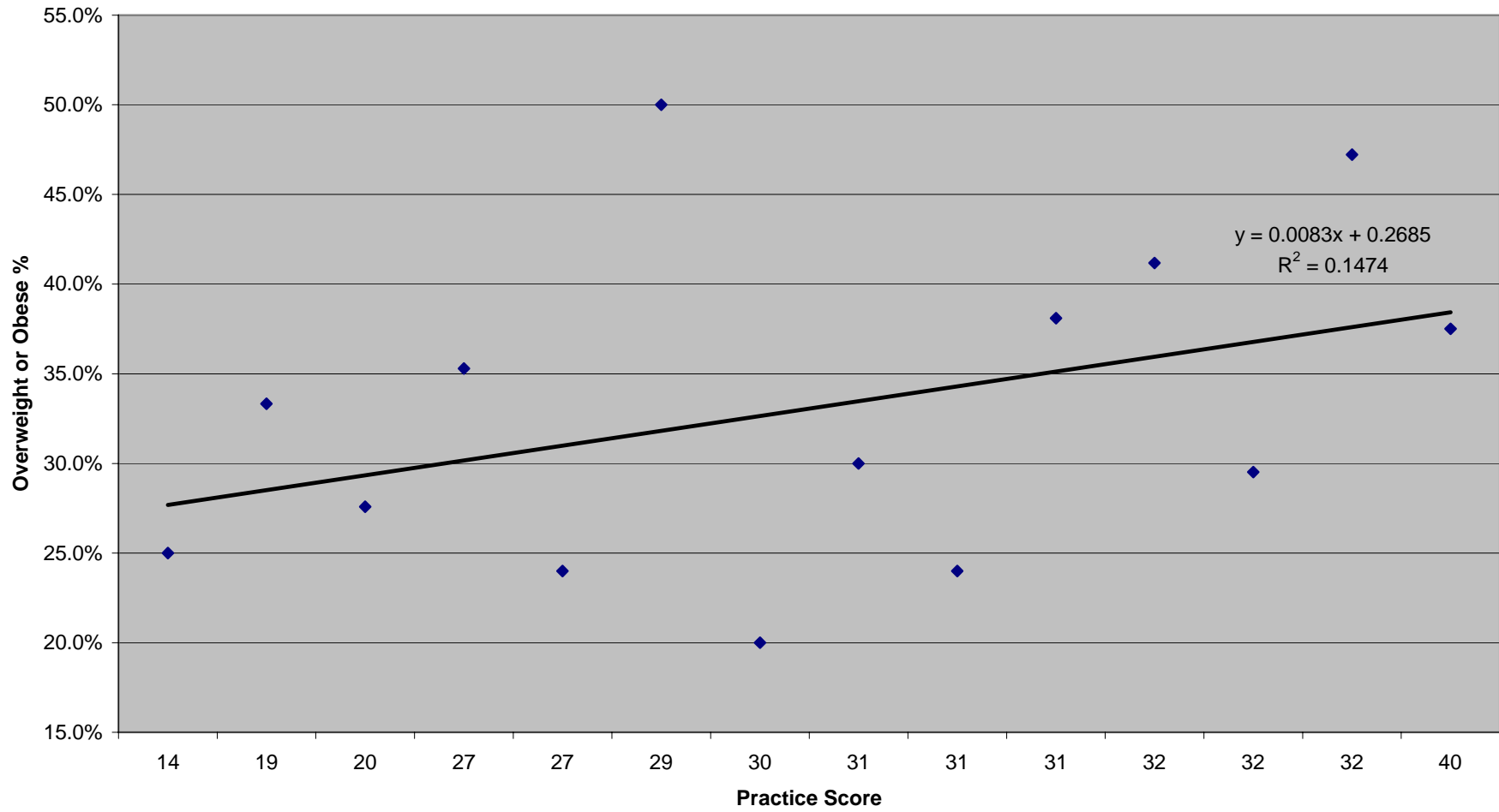


Figure 7 - Practice Score vs NCMP Participation Percentage (Reception)

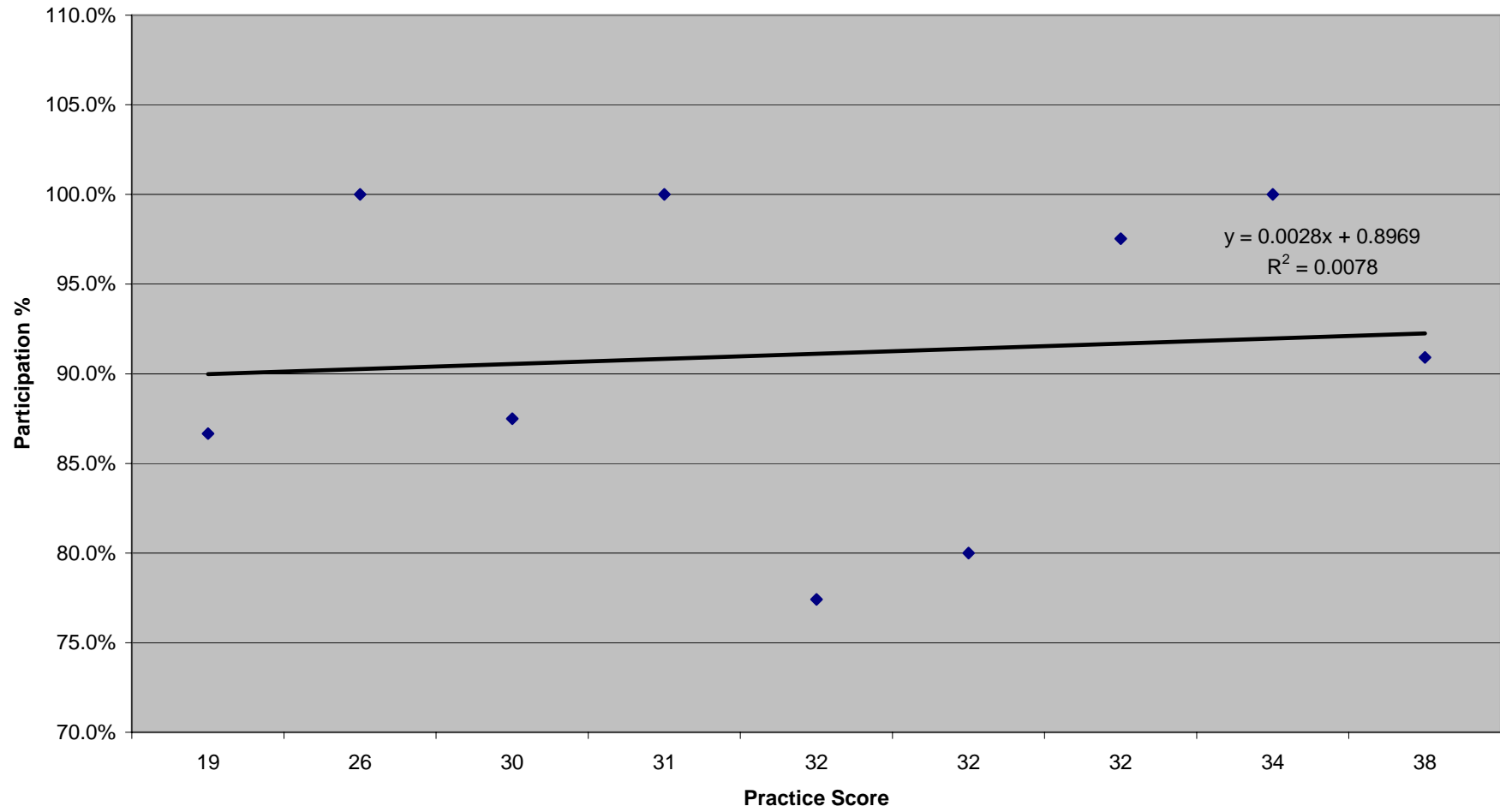


Figure 8 - Practice Score vs NCMP Participation Percentage (Year 6)

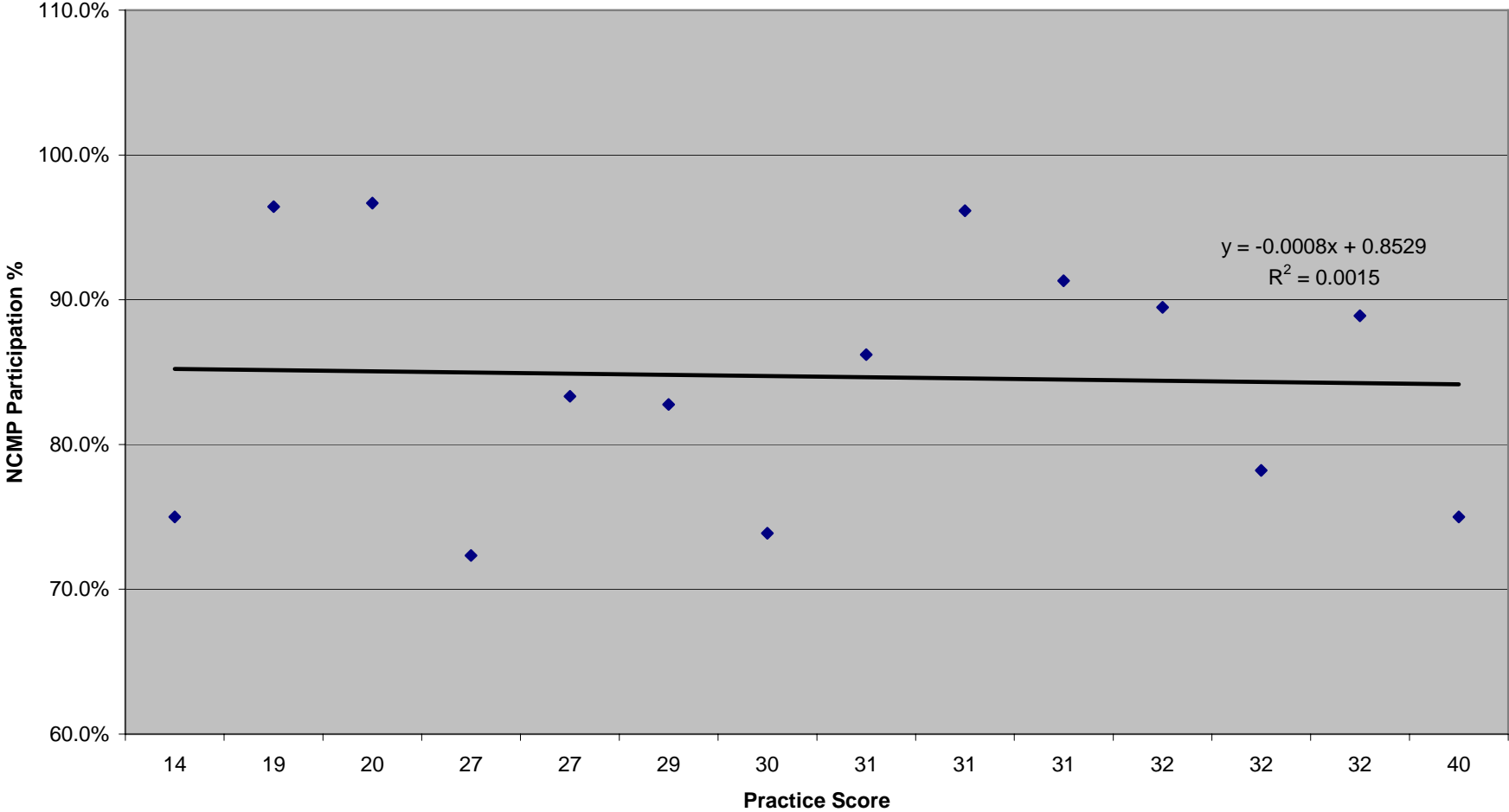
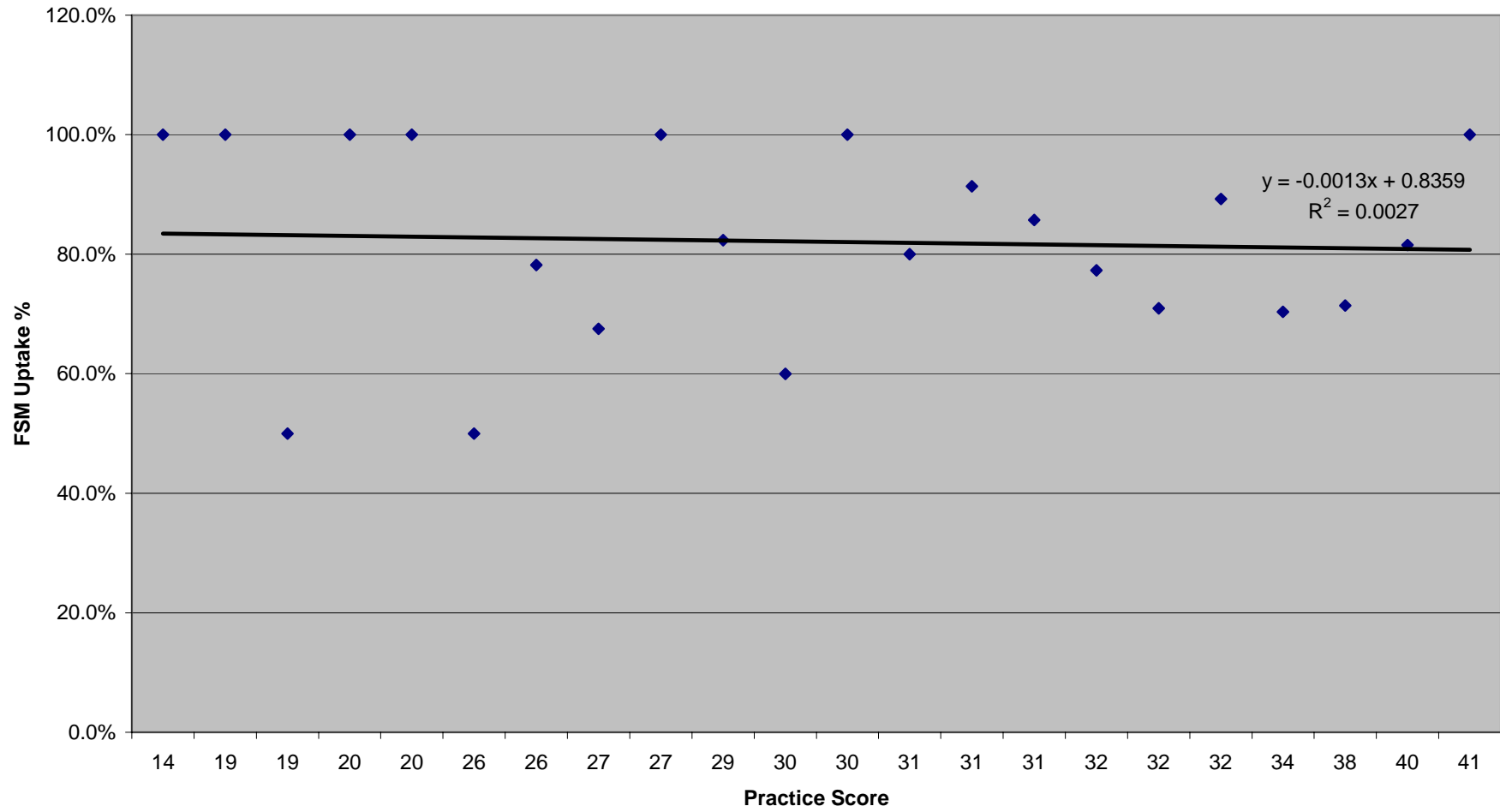


Figure 9 - Practice Score vs FSM Uptake



6. Discussion

6.1 WSFP scoring

The interpretation of the control charts shows that the process of producing a WSFP needs to be modified to reduce the between school variation, something which would need to be addressed by the local healthy schools teams (with support from the regional and national teams). To follow the theory of the control chart, the school which is below the lower control limit would need special attention to see what factors are responsible for their low score. As there is guidance available on how to produce a written WSFP, it was expected that the quality of would be high; however the control charts show that only four schools' WSFPs met the 'Outstanding' level.

These graphs should be interpreted with caution however; as there is concern that some of the schools may have created or at least enhanced their WSFP in response to the request for it. This was indicated by the 'date created' field and that some were marked as 'draft'. This may have resulted in some of the scores being artificially high but it is impossible to say with any certainty which ones these would have been.

As reported earlier, one school replied to say that they do not have a WSFP, but that healthy eating and a healthy lifestyle is integrated across Personal Health and Social Education and other programme areas within the curriculum. When this was queried, the Regional Healthy Schools co-ordinator informed the Project lead that it is possible as part of the self-assessment on the Healthy Schools database to have one area for development in each section, so that this is acceptable. As also reported

earlier, two schools when requested revealed they did not have a WSFP. All three of these schools had self-validated on the Healthy Schools database. This raises the process of self-assessment as an issue for Healthy Schools.

It has to be considered that the researchers scoring the WSFPs of all schools may have been unintentionally biased towards those schools who had accepted a visit to carry out the questionnaire, so there is a possibility of the element of researcher bias.

6.2 Demographics

The demographics data from both the random sample and the schools visited (Tables 2 and 3), shows there is a good spread of schools across deprivation and educational standards. There is not a great difference between those schools that accepted a visit and those that did not, which suggests that the demography of the sample was not skewed by those schools who did not want to participate. It is hard to draw many conclusions from this data however due to the small numbers.

6.3 Quantitative data from school visits

Overwhelmingly, practice was better than what was outlined in the WSFP (see Table 4). This was true for all but three of the criteria (policy on sandwiches, clear curriculum and existence of a cooking club). Most notably (all 'Essential' criteria), in practice more schools had a consultation process, met the needs of allergies, vegetarians and religious needs and had healthy snacks, than what was outlined in their policy. Policy on packed lunches ('Desirable'

criteria) was most notably less prevalent in practice: despite being mentioned in 64% of the schools' WSFPs, in only 41% of the schools was this found in practice.

In many of the schools visited, packed lunch provision was a concern, despite some schools saying they had guidelines on what children were allowed to bring into school. Many schools reported feeling uneasy telling parents what they could provide their children for lunch, or that they did not want to 'invade the parents privacy', or that they preferred it to be an 'informed choice', whilst others reported that regular engagement with and encouragement of parents was essential for a policy to be consistent. Some parents commented that they did not like being 'dictated to' by the school over rules concerning unhealthy snacks. One school reported that parents fed back to a consultation that they did not want the school to 'interfere' with packed lunches. Some schools said that more training for parents on packed lunches was needed. All this shows the importance of engagement and consultation with, and training for parents. Many schools reported children 'policing' packed lunches themselves and pressuring and educating parents to make them healthier, this shows how important involving children in the process is, and teachers and governors were very supportive of this. One school explained that consultation with parents over the WSFP included information given out via letters and parents evenings, but when questioned on the consultation, parents from this school expressed a desire for more input into the WSFP.

Although in this study the packed lunch policy is marked as a 'Desirable' criteria, 'Healthy Weight, Healthy Lives: A cross-government strategy for England'⁵² states that: 'To promote a culture of healthy eating, the Government now expects *all* schools in consultation with parents, pupils and staff to adopt whole school food policies covering the promotion of school lunches, all food provided by or brought into school and what is taught about food in the curriculum. *In particular, schools will be expected to develop healthy lunchbox policies, so that those not yet taking up school lunches are also eating healthily*'.

An interesting conflicting issue, is whether schools should be encouraging packed lunches, when the target is to increase school meal uptake via the 'Million Meals' campaign. Pupils who eat packed lunch cost the schools in money spent on seating and supervision, when perhaps this could be better diverted into school meal provision and improvement. This is an area which needs further debate nationally and could be linked to some parents' concern over the cost of school meals.

All schools had some kind of consultation process (important for pupil and parental engagement), but this varied in how formal/structured it was and how successful it was in increasing parents' and pupils' knowledge. Many schools sent parents letters and included information in parent's evenings. The most successful schools in practice seemed to be those that had active pupil involvement in developing the policy and strong leadership from senior management, giving ownership across the school.

The other areas slightly less evident in practice than that claimed in the WSFP, were the clarity of the curriculum concerning food ('Essential') and the existence of a cooking club ('Desirable'). This shows that some schools need to be more explicit about how they integrate healthy eating into teaching. The lack of clarity over the curriculum might be due to teachers not being able to explain it well enough, as obviously this assessment was based on questionnaire responses. This should be addressed, as if some teachers find it difficult to clearly explain the curriculum concerning food, this may translate to the pupils themselves.

Some schools commented that they found running a cooking club difficult and unsustainable as it often required work with outside agencies or commitment from parents or catering staff to volunteer to help. Claiming a cooking club in the WSFP however means a school should do its best to continue this, to ensure they are not mis-representing activity to parents and the wider school community. One school did cooking in school, but only the 'Gifted and talented' children club had cooking as an option regularly. Although this could be seen as a good reward, it seems to promote inequalities and in fact those children who are not 'gifted and talented' may get more benefit from cooking skills.

Overall, the picture in the 22 schools visited was overwhelmingly positive in terms of observed practice. But the higher numbers shown in practice demonstrate that many schools are not reflecting their good practice well

enough in their WSFP. Of course, the practice is most important, and it demonstrates that the principles of the WSFPs in these 22 schools are being implemented effectively. The WSFP however, acts as a communication mechanism, especially to the parents and community. All the studies in the earlier literature review, stress the importance of School Food Policies to strategically direct the work of a school. The WSFP will prove invaluable in assisting further engagement with parents over issues such as packed lunches: to demonstrate to parents that the school considers food in school to be an important issue, that the school's position is clear and parents should be aware and comply with this, in order to assist the school in maintaining the high standards awarded to them in Healthy School status.

As discussed above, it was felt that some of these schools may have produced their WSFP in response to the request for them. As the data has shown though, even if policies are poor, this does not mean that the practice is bad. As detailed above however, this does not underestimate the importance of a policy, to facilitate the school in developing good relationships with parents and furthering the good practice the school has in place in order to become outstanding in their work around healthy eating and contribute to providing children with healthy lifestyles. The date of creation of the WSFPs of each of the schools selected varied, so it may be that practice has moved on since the policy was produced, but it is important to remember that a WSFP should not be a static document, but something that should be revisited and developed upon at regular intervals, so that new entrants and

new parents at the school remain engaged in the process and the activities of the school.

The variation in judgement/assessment of the checklist scoring between the two sessional workers, means there is the possibility of some bias in the scoring, as one seemed to consistently score higher than the other. This may have been due to difference in timeliness in completing the questionnaire data. The chance of this bias is reduced though, as the Project Lead went through all the recording sheets and double checked the scoring and amended as appropriate. It is impossible to eliminate all mistakes in data collection when there are two individuals involved and to ensure complete consistency between the two of them. Ideally one person (the Project Lead) would have carried out all data collection in each school, to ensure consistency and improve their knowledge of each school visited, however logistically this was not possible in the time period available.

6.4 Changes children making

When asked about changes children were making to food choices across the school day (see Table 6), 80% reported that they felt as a result of the WSFP and the practices that had been implemented, children were making healthier choices, 71% said children had improved attitudes towards healthier food and 53% said children had improved knowledge and eating behaviour. Only 21% said that they thought behaviour had improved as a result of the initiatives/changes to school food, opinion on this being much more variable. These questions were asked of Head teachers, Governors and Teachers.

These results show that where it is done successfully, implementing a WSFP seems to make a difference to children's attitudes and knowledge and sometimes to their behaviour; or at least that the staff feel this to be the case. Research included as background reading in the literature review, on the impact of food on a child's behaviour, concluded that there was no link between bad behaviour and the intake of sugary foods for example and in fact the behaviour change in children may be due instead to what is expected by adults. The views of the teachers and governors involved in this research, suggests that they see an overall culture change as having a positive impact on the attitude of children, but they are perhaps aware that individual initiatives are unlikely to have an impact on children's behaviour.

6.5 School environment

The school environment was also assessed as part of the school visit (see Table 7). Overall the school eating environment was very good, with attractive eating environments and food choices reflecting the menu. Five schools did not have nutritional promotional materials; important to create a 'healthful environment', encourage healthy eating and a healthy lifestyle and contribute to the whole school approach of Healthy Schools. There was also concern with three schools' tuck shops not meeting the necessary standards, selling some snack products and drinks which should by now have been replaced by healthier alternatives, this was fed back to the schools for them to address.

Five schools did not display the lunch menu, needed in order for children to make informed choices. Often however, schools have little control over the lunch time provision, as this service is controlled by the Local Authority catering service. In all but two of the 21 schools visited (those who had a hot meals service), the catering services were provided by the Local Authority, the other two schools used an independent provider. With the independent provider, the issues were that the costs were often a lot higher (as they included transportation costs) and sometimes the pupils didn't like the quality of the food. Using a Catering Service often means little control over the training and level of involvement the catering staff have in school activities and how flexible they can be with the menu. When asked 'Who has the most influence over the food provided in your school?' the vast majority of school cooks/catering managers answered that it was the Catering Provider Firm, although they may have been answering this question from the point of view of just the school meal, rather than the whole school day, as many of them had little involvement in activities other than lunchtime.

One school visited did not have any hot meal provision, so anything to do with hot meals was obviously not relevant, and they were not counted in any of this data, including having a policy for hot lunches and providing CPD/Training for catering staff. The lunch that was provided for FSM pupils (a packed lunch) did meet standards for school lunch. Some schools (particularly small ones) did have hot meal provision themselves, but had food provided from a central kitchen at another school, so their control was more limited.

In each of the schools visited, there was adequate room for the children to sit to eat their lunch, although, in one school the eating environment was pushed to its limit and in another school where space was limited, parents complained about a rota system. With this system, the children had to eat their lunch in 15 minutes shifts, they were asked to wait in a line in the hall for 15 minutes for their food to digest before they went into the playground, although the advantage of this system was that packed lunch children were able to sit with their friends. In many schools there were two or more sittings for younger and older children and in some schools children complained about being rushed at lunch time. In some schools, pupils had to eat packed lunches in their classrooms as there was not enough room for all of them together in the school hall. Schools with these issues were referred to materials on how to improve the dining room environment.

The studies included in the literature review all highlight the importance of improving school food environments to assist with improvements in healthier food consumption itself. This and the issues raised in this study via questionnaire responses and observation, demonstrate how important it is to have a school environment conducive to promoting healthy eating and a healthy lifestyle.

6.6 Other issues

Most children when asked, reported that when it was someone's birthday in their class, they had sweets to take home, the researchers felt that this does not seem to send the best message, as potentially this could happen often. It

would be a better idea to represent healthy food as a reward at special times of the year and this could be incorporated into a schools reward system.

One school reported 'Fruitless Friday' when children are allowed to bring any snack they like from home (although the school also said that by Friday many children bring in fruit anyway). The school feels this encourages choice and balance; but the again the researchers were concerned that this may send the message that not having fruit is a reward; instead fruit should be something that is common place in the school, for children to enjoy at any time.

6.7 Associations with routinely collected data

Plotting the practice scores with the NCMP data showed no significant correlation, which with the very small numbers was to be expected. It is unlikely that having a WSFP in a school would have such a specific impact. Perhaps over a longer term with sustained school culture and environment change, reduction in obesity levels might be shown, although it is important to understand that tackling obesity requires a whole life change for a child.

The data presented here may suggest that for the purposes of the NCMP dataset, this is not a representative sample of schools for Reception Year, again however there is an issue with very small numbers. This in turn suggests that in order to have a representative sample (based on the NCMP data available and the drop out rate from the initial sample), a sample size of

83 would be needed*, as already mentioned, this was not feasible in the time and with the resources available.

Plotting both the NCMP and FSM data were attempts to see whether better practice around Healthy Food across the Whole School day translates into better engagement with various public health programmes; this has shown not to be the case in this instance, but again could be due to small numbers.

* The figure of 83 is based on the following: Sample size = 37, 22 participated (59%). Of 22 participating schools NCMP data was available for 9 (41%). To achieve a representative sample of 20 schools with NCMP data, it would require 49 participating schools, which in turn would require a sample size of 83 (based on the percentages observed).

7. Conclusions

The results show that overall practice in schools is better than that stated in policy, with some exceptions. Schools are implementing policy effectively, and more, but are not appreciating the importance of policy in further developing and sustaining work with the whole school community. Schools need to ensure their policy on food across the whole school day is better reflected in more robust WSFPs that are regularly referred to and evolving documents. The large variation in WSFPs suggests that some kind of standardisation of the process would be useful, whilst retaining an element of the individual needs of the school.

Issues with the self-validation on the Healthy Schools website have been revealed, as it was discovered that some schools actually did not have a WSFP, despite having claimed so. No direct impact on the health and wellbeing of children can be found from this study, due to small numbers and the need for a longer term view, although the qualitative reporting from questionnaires showed that some schools feel that the WSFP has had an impact.

8. Recommendations

There is a need to focus on WSFPs with schools, led by national, regional and local Healthy Schools teams, to ensure schools are reflecting both their vision and standpoint on healthy food and also the good practice in place. It is important that WSFPs are effectively implemented in practice and the claims followed through (and that they meet national standards), but it is also very

important that they are a reflection of the school's individual characteristics and the knowledge that the school has of their school community. It is important that schools ensure that the 'Essentials' of a WSFP such as a clear curriculum, clear responsibilities and a good consultation process are in place before 'Desirables' such as breakfast clubs and cooking clubs are introduced. This good practice can then be developed upon with activity in areas such as sustainable schools, which will be complementary and beneficial to the further development of the schools' whole school approach to healthy lifestyles.

It is clear that moderation of and guidance for schools is very important, especially in light of the self-validation issues that have been revealed. It appears that the minimum evidence needed against the Healthy Eating theme is not always being required or tested before Healthy Schools status is awarded or renewed. This is something that should be addressed by the Healthy Schools Programme.

Engagement with parents is clearly an important issue, which needs time and resources invested by schools. Alternative ways to target parents could be through the governing body, as many of the governors are parents, or through Family Information Services in Local Authorities, who provide information and advice to parents and carers on any aspect of childhood development⁵³.

Many Local Healthy Schools Teams have very good relationships with the schools in their area, but this varies across the region, depending on the number of schools and the equivalent resources that are attached to this.

Teams would benefit from further sharing across Local Authority areas, of their practices, systems and processes and also of good practice that exists in individual schools. This may also assist with reducing the large variation across WSFPs.

There is a good opportunity to use the process and findings of this research to repeat and expand the work, using the current data as a baseline for further development. The research may reveal more if it were possible to recruit more schools, which would obviously need further investment of time and resources. This may also be aided if it were headed by the National Healthy Schools Programme, to encourage schools to take part. It may also be useful to repeat this study at a larger scale in Secondary schools in the region, where there are further issues around pupil choice and whole school engagement.

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