

MUNCH & CRUNCH

HEALTHY LUNCH PROJECT

Evaluation Report



Feidhmeannacht na Seirbhíse Sláinte
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Munch & Crunch Healthy Lunch Project

An evaluation of a school based project to encourage the development and implementation of healthy lunch policies in primary schools in the south east region of Ireland.

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SUMMARY

Initiated by the South Eastern Health Promotion Department, *Munch & Crunch* is a healthy lunch project targeting 257 primary schools in the south east region of Ireland. The project focuses on encouraging the development and implementation of healthy lunch policies within the school environment.

In January 2003, in conjunction with Waterford Institute of Technology, an evaluation was carried out to assess the overall progress and impact of the project. The evaluation involved all 257 primary schools and was primarily quantitative in nature; it was reinforced with secondary research data and qualitative data in the form of semi-structured interviews.

The main objectives of the evaluation were to:

- Ascertain the percentage of schools with healthy lunch policies in the Irish counties of Wexford, Waterford and Kilkenny
- Procure information regarding the development, implementation and sustainability of healthy lunch policies within the school environment
- Assess the overall impact and influence of the project in helping school management to develop and employ a healthy lunch policy

The results of the evaluation are extremely positive; 84% of the schools surveyed have a healthy lunch policy in place. Seventy two percent of principals indicated that the *Munch & Crunch* project had influenced the overall formulation and development of their schools' healthy eating policy. Almost 90% of policies are based on the promotion of healthy eating within the school environment. Over three-quarters of those with a healthy lunch policy in place have noted a positive increase in the nutritional content of children's lunch boxes.

However, if time and resources had not been an issue, observational methods may have proved a more reliable indicator of healthy lunch practices within the schools. The overall lack of student consultation and involvement in the development of healthy lunch policies also requires further attention.

The *Munch & Crunch* project has highlighted that effective policy within the primary sector needs more than a simple policy statement. It requires the ongoing support and commitment of students, staff and parents to ensure success. The promotion of community partnerships and the involvement of children in the development and implementation of school policy have considerable potential for further exploration. Overall, it would appear that *Munch & Crunch* has helped to increase awareness and expand the emphasis on health promotion and healthy eating in schools in a formal capacity. Further research to examine children's and parent's attitudes and opinions in relation to healthy eating policies and programmes within the school setting is recommended.

INTRODUCTION

School-based health promotion interventions have been effective in transmitting knowledge, developing skills and supporting health behaviour choices (World Health Organisation (WHO) 1996). The emphasis on school-based programmes recognises that health related knowledge of nutrition for children begins at an early age (Warren *et al.* 2003). Primary school aged children are a prime audience for interventions to promote healthy eating habits (Carter and Swinburn 2004). Schools can reach almost all children and adolescents during their first two decades in life (Glanz *et al.* 1995), and research clearly indicates that no other public institution has as much continuous and intensive contact with children (Carter and Swinburn 2004).

According to the World Health Organisation (1995), food and nutrition are essential elements of a health-promoting school, and can aid in the promotion of health and increase the learning potential of schools, families and other community members. Nutrition is one of the main topics dealt with in the Irish National Health Promotion Strategy 2000-2005 (Department of Health and Children 2000a) and is deemed to be an area of relevance in Ireland today, particularly given the documented increase in obesity and decline in physical activity amongst Irish children (National Taskforce on Obesity 2005, Burns *et al.* 2004, Broderick and Shiel 2000).

In 1999, the Health Promotion Department of the South Eastern Health Board (SEHB) piloted a healthy lunch project entitled *Munch & Crunch* in response to increased demand from school personnel for information on healthy eating. The pilot project was set up to encourage and support primary schools in County Waterford to develop and implement a healthy lunch policy. The main aim of the intervention was to work with school staff and parents councils in the development of a healthy lunch policy for the school. The rationale for *Munch & Crunch* was to help schools provide a supportive environment for healthy eating and to encourage and influence the health and well-being of students. School personnel were given ideas on how best to develop and implement a healthy lunch policy (see Appendices 6 and 7) and a promotional leaflet and poster were provided. Since the initial pilot project, the *Munch & Crunch* programme has been introduced to 257 primary schools throughout the south east region of Ireland.

In 2003, an evaluation of the *Munch & Crunch* project was carried out in order to:

- Ascertain the percentage of schools with healthy lunch policies in the south east region of Ireland
- Gain further information regarding the development, implementation and sustainability of healthy lunch policies within the school environment
- Understand the various elements (i.e. the school curriculum, the wider community, school environment) that may impact upon the successful implementation of a school health promotion programme
- Assess the overall impact and influence of the *Munch & Crunch* project in helping school management develop and implement a healthy lunch policy.

1 LITERATURE REVIEW



1.1 INTRODUCTION

The increasing prevalence of obesity is proving to be one of the greatest public health challenges in the new millennium (Visscher and Seidell 2001). In particular, the dramatic increase in childhood obesity across Europe is of considerable concern, now reaching epidemic proportions (National Taskforce on Obesity 2005). Numerous newspaper articles have emerged in recent years reflecting concerns about the health and diet of children and adolescents both at home and abroad.

Newspaper Headlines Captured, 2000-2005:

'Children growing up on a diet of death'

Daily Express, June 2nd, 2000

'The Irish growth rate weighs in at an all-time high'

Irish Examiner, August 14th 2000

'Children who munch their way to ill health'

The Irish Times, March 11th, 2000

'We are poisoning our children with a diet of sugar and fat'

Sunday Independent, May 4th, 2003

'60,000 obese children in Republic'

The Irish Times, November 26th, 2004

'Super-size nation'

The Irish Times, March 19th, 2005

Both national and international research clearly indicates that changes in diet and a decrease in physical activity have contributed to the growing number of overweight children (National Taskforce on Obesity 2005, Kelleher *et al.* 2003, Ebbeling *et al.* 2002, Murphy 2001, Broderick and Shiel 2000). In a study conducted in the SEHB region among 9-11 year olds, 33% of those assessed were overweight, of which 8% were clinically obese (Burns *et al.* 2004). The National Children's Food Survey (2005) of 600 children aged 5-12 years from primary schools throughout Ireland revealed that the prevalence of obesity is 9% in boys and 13% in girls, while prevalence of overweight is 11% in boys and 12% in girls (McCarthy *et al.* 2005). Taken together this means that one in four girls and one in five boys are either overweight or obese. It is obvious that efforts to prevent obesity should begin in early childhood.

The health consequences of obesity are immense: they include non-insulin dependant diabetes mellitus (NIDDM), coronary heart disease, osteoporosis and psychosocial disorders (Ebbeling *et al.* 2002). NIDDM (also known as 'adult onset diabetes'), traditionally rare in childhood, now accounts for one in three of all

new cases of diabetes among children in the U.S. (Fagot-Campanga *et al.* 2000). Whilst genetic and environmental factors influence the determinants of a person's susceptibility to weight gain, energy balance is determined by calorie intake and physical activity (National Taskforce on Obesity 2005). Therefore, the adoption of sensible eating habits and an active lifestyle early in childhood is paramount.

1.2 DIET PATTERNS DURING CHILDHOOD AND ADOLESCENCE

Eating patterns among both children and adolescents continue to change, with an increasing reliance on frequent snacking and consumption of so-called 'junk foods' (Nolan *et al.* 2004, Coates *et al.* 1985). One national study has shown that over half of Irish children consume sweets, 37% drink fizzy drinks, 27% consume crisps, 12% eat chips and 7% eat hamburgers at least once daily (Nolan *et al.* 2004). A decline in reported fruit consumption among school-going children has also been reported (Kelleher *et al.* 2003). In fact, the National Children's Food Survey (2005) has revealed low intakes of fruit and vegetables, with average intakes well below international recommendations for children (Hannon *et al.* 2005). Furthermore, despite the shocking prevalence of overweight and obesity, significant numbers of Irish children have inadequate intakes of calcium, iron, vitamins A, D, C and folate (McCarthy *et al.* 2005), which may not only be detrimental to their health in the short-term, but potentially increase their risk of developing many chronic diseases.

The rising consumption of sugar-sweetened drinks by children has been an area of major concern for health professionals in recent years (WHO 2003). A prospective, observational study revealed that with every daily serving of sugar-sweetened drink consumed, the risk of children developing obesity was 60% (Ludwig *et al.* 2001). Another study revealed that total energy intake was about 10% greater in school-aged children who consumed soft drinks than in those who did not (Harnack *et al.* 1999). A policy statement issued by the American Academy of Pediatrics (AAP) in 2004 warned health professionals, parents and teachers of the adverse health effects associated with a high intake of soft drinks in schools. Potential health problems include increased risk of overweight and obesity, osteoporosis and poor dental health. The AAP recommended that steps be taken to eliminate soft drinks in schools, a recommendation that has been echoed by the Irish National Taskforce on Obesity (2005). According to the National Task Force on Obesity (2005), many fruit drinks and cordials are equally as energy-dense as soft drinks and may promote weight gain if consumed in large quantities. Interestingly, those meeting recommendations from the milk food group from the Department of Health and Children's Food Pyramid are less likely to be obese (National Task Force on Obesity 2005).

For young people, adolescence is a transitional stage when new eating habits may be adopted. It is a time of new independence and diminished family influence, especially over food intake. It is also a time of erratic eating behaviour (National

Health and Medical Research Council 2003). Table 1.0 outlines the various facets of eating behaviour that are different or more pronounced in adolescence than in other age groups, and may cause concern for future generations.

Table 1.0
Eating behaviours during adolescence

Behaviour	Notable Aspects / Features
Missing Meals	Especially breakfast
Eating snacks and confectionary	The major snack is usually in the afternoon
Takeaway foods - unconventional meals	Regular consumption
Experimentation with alcohol, soft drinks	Soft drinks are preferable if they are an alternative to alcohol, but otherwise displace water and milk
Distinctive likes and dislikes - high energy intake	Occurs near peak height velocity in girls (age 12), but in boys may come later than the age of peak height velocity (age 14)
Low levels of intake of some nutrients - dieting	Iron, calcium and in some studies Vitamin A, C and zinc

Source: National Health and Medical Research Council 2003.

Although the need to tackle obesity is evident, there is a fear that preventative or anti-obesity strategies may fuel 'fears of fatness', thus resulting in increased numbers engaging in harmful weight control practices such as smoking and inappropriate dieting (Flynn 1997, O'Connor *et al.* 1997). Of concern, the Health Behaviour in School Children study revealed that the increase in the consumption of 'junk foods' was coupled with an increase in the number of boys and girls dieting, with nearly one in five young girls aged between just 12 and 15 years having been on a weight reducing diet (Kelleher *et al.* 2003).

Preliminary data from a study in Dublin of almost 700 adolescent girls reflect findings in the UK and the US that 'fatness phobia' is a major public health problem in this age group (Ryan *et al.* 1997). Indeed the methods cited by these girls to curb weight gain are quite alarming: 51% reported skipping meals, 19% reported smoking, 15% reported inducing vomiting, whilst 4% reported taking laxatives, fasting and using diet pills. Research in Britain found that in an attempt to cut down on dietary fat, consumers were cutting down on the amount of milk and meat being consumed in their daily diet (Buttriss 1997). The avoidance of milk and meat appears to be widespread among women and teenage girls as a strategy for decreasing dietary fat intake (Cashel *et al.* 2000, Gilbody *et al.* 1999, Ryan *et al.* 1998). Additional research also reported dieters consuming unhealthy foods less frequently than non-dieters, but did not report an increased consumption of fruit and vegetables.

1.2.1 PARENTAL INFLUENCE

Evidence suggests that food intake and physical activity are strongly influenced by parents (McCarthy *et al.* 2005, Ebbeling *et al.* 2002). Gillman *et al.* (2000) have shown that children who eat meals with their family consume fewer high calorie foods and eat more fruit and vegetables. On the other hand, parents who have problems with food and unhealthy eating habits predispose their children to having poor eating habits (Gillman *et al.* 2000). According to Whitaker *et al.* (1997), an overweight school aged child with an obese parent has over a 70% chance of being obese in young adulthood.

1.3 PHYSICAL ACTIVITY PATTERNS DURING CHILDHOOD AND ADOLESCENCE

There is evidence that obese children are less active than lean children and that inactivity is associated with an increased prevalence of obesity (Garaulet *et al.* 2000). Increasing sedentary lifestyle patterns are probably a very significant factor in the recent rise in obesity in the Republic of Ireland. The North / South Ireland Food Consumption Survey (2001) reported that, on average, overweight and obese individuals in Ireland watched 2-3 hours more television per week than their normal weight counterparts (Irish Universities Nutrition Alliance 2001). Another study of 4069 children in the USA found that the prevalence of obesity was lowest in children watching one or fewer hours of television a day, and highest among those watching four or more hours per day (Crespo *et al.* 2001). The same report also noted that television viewing amongst girls was positively associated with obesity, perhaps because watching television displaces physical activity, but also evidence suggests that children passively consume excessive amounts of energy dense food while watching television (Robinson 1995). Furthermore, a study in the US has revealed that children are exposed to 20-24 advertisements an hour during Saturday morning and weekday afternoon time slots, with food advertisements accounting for well over 50% of all advertisements targeting children (Coon and Tucker 2002), thus dramatically increasing the likelihood that children exposed to these advertisements will choose these foods.

An unpublished survey by the Physiotherapy Department at Trinity College, Dublin, involving 786 children attending Dublin schools, found that 25% of girls and 14% of boys between the ages of seven and nine did less than the recommended amount of exercise per day (Broderick and Shiel 2000). The National Health and Lifestyle Surveys (2002) also noted that among school going children, vigorous exercise rates are higher among boys and girls at all ages, however, the gender gap doubled by the age of 15-17 with an increase in the number of girls reporting no activity (Kelleher *et al.* 2003). This might help explain the higher percentage of girls (18.5%) than boys (6.7%) resorting to dieting as a form of weight control (Kelleher *et al.* 2003). The National Children's Food Survey 2005 revealed that TV viewing

times for many children are high both on weekdays and especially at weekends – one in three spend more than 2 hours watching TV on weekdays and two in three at weekends (McCarthy *et al.* 2005). Furthermore, the same study revealed that nearly three quarters of all children used motorised transport to get to and from school, with only one in five walking. Overall, one in three live less than half a mile from school and one in two less than one mile from school. Another Irish study, the Take PART (Physical Activity Research for Teenagers) study revealed that obese adolescents were more than twice as likely to have a high incidence of sedentary leisure habits compared to normal or overweight adolescents (Woods *et al.* 2004). A sedentary lifestyle in adults entails a high risk for several chronic diseases (Fagot-Campanga *et al.* 2000). However, it is thought that the benefits of an active lifestyle during childhood and adolescence would track into adulthood. Thus, it is important to ensure that children, and those who interact with them, are aware of the role that regular physical activity can play, not only in relation to ‘fitness’ and ‘fatness’ in childhood and adolescence, but also in relation to later susceptibility to chronic diseases. However, a US study of 112 8-12 year olds revealed that, although they believed good health was desirable, most gave little thought to the subject, recognising neither its immediate benefits nor long-term importance (Borra *et al.* 2003). They associated achieving ‘good health’ with what they ate more so than physical activity, and for many the term ‘healthy’ had negative connotations, such as parents making them eat fruit or vegetables they did not like, or not being able to eat favourite foods.

1.4 THE SCHOOL AS A SETTING FOR HEALTH PROMOTION

“A health-promoting school is a good operational concept. It can serve as a unifying force for concerted local, national and international efforts to improve health and maximise each country’s investment in education. All schools can become health-promoting schools, if we work together to make it happen”
(WHO 1995).

The WHO Global School Health Initiative, launched in 1995, sought to mobilise and strengthen health promotion and education activities at local, regional, national and global levels (WHO 1995). The initiative was designed to improve the health of students, school personnel, families and other members of the community through the schools. The general direction of the Global School Initiative is guided by the Ottawa Charter for Health Promotion 1996 and the Jakarta Declaration of the Fourth International Conference on Health Promotion (WHO 1997).

A health-promoting school can be characterised as a school constantly strengthening its capacity as a healthy setting for living, learning and working (WHO 1997). A health-promoting school:

- Strives to improve the health of school personnel, families and community members as well as students

- Fosters health and learning with all measures at its disposal
- Engages health and education officials, teachers and their representative organisations, students, parents and community teachers in their efforts to make the school a healthier place
- Strives to provide a healthy environment, with the introduction of school health education and school health services along with school/community projects and outreach, health promotion programmes for staff, nutrition and food safety programmes, opportunities for physical education and recreation and programmes for counselling, social support and mental health promotion
- Implements policies and practices that respect an individual's self-esteem, provides multiple opportunities for success and acknowledges good efforts and intentions as well as personal achievements (WHO 1997).

1.4.1 WHY SHOULD SCHOOLS PROMOTE HEALTHY EATING?

“The school as a setting for interventions has a formative role to play in the child’s social, personal and health education. It can provide the environment, the approaches and the variety of learning experiences that will help them to understand themselves, to relate to others and to establish and maintain healthy patterns of behaviour” (National Nutrition Surveillance Centre 2001).

According to the WHO Global School Health Initiative (1995), schools are an ideal setting to promote health and good nutrition for several reasons:

- Schools reach a high proportion of children and adolescents from all socio-economic backgrounds
- Young people are enrolled in schools at a critical age of development in which lifestyles, including eating patterns, are developed, tested and adapted through social interaction between students, teachers, parents and others
- Schools provide opportunities to practice healthy eating and food safety
- Since eating is a socially learned behaviour that is influenced by social pressures, schools can teach students how to resist unhealthy social pressures
- Skilled personnel are available to provide follow-up and guidance (after appropriate training of student, teachers and other service personnel)
- Evaluations show that school-based nutrition education can improve the eating behaviours of young persons.

In addition, schools remain one of the few places where children are relatively free from commercial interests. Television is the principal channel used by food marketers to reach children (Hastings *et al.* 2003, Neville *et al.* 2005). The type of food being advertised, however, is of huge concern; most of which is fast food, soft drinks, sweets and sugar sweetened breakfast cereal (Ebbeling *et al.* 2002). Promotion of healthy eating in schools is therefore one of the most important opportunities to ensure that children can choose a healthy diet now and later in life.

1.4.2 EXAMPLES OF HEALTHY EATING PROGRAMMES WITHIN SCHOOLS BOTH AT HOME AND ABROAD

Nutritional health education, in particular, is becoming increasingly prominent in school programmes worldwide, either as part of dedicated courses such as social and scientific home economics or wider based programmes. Within the Irish school setting, a **Nutrition Education Programme for Primary Schools** (NEAPS) was piloted in 1998 (Friel *et al.* 1999). The programme, which was based upon the US 'Hearty Heart and Friends' (Perry *et al.* 1988), was established under the auspices of the Department of Health and Children and in conjunction with the North Western and Eastern Health Boards in Ireland. The overall aim of the programme was to build awareness of the benefits of healthy eating, induce positive behaviour change and increase the level of nutritional awareness among children in third and fourth classes. An evaluation of the programme, which incorporated completed diaries and food-pairing questionnaires on food behaviour, knowledge and preferences, indicated significant differences in the children's behaviour and preference levels for healthier foodstuffs after the NEAPS programme (Friel *et al.* 1999).

In the UK, government surveys have shown that one in five children do not eat any fruit in an average week (Department of Health UK, 2003). As a result, a pilot scheme for providing free fruit for primary schools was introduced. **The National School Fruit Scheme**, a UK government initiative, aimed to provide every child aged between four and six with a free piece of fruit each day. Several hundred schools across England were chosen for the pilot scheme. Key findings included:

- The majority of children were positive about the Scheme
- School staff regarded the Scheme as a way of improving children's health (99%) and a supplement to children's diets (99%)
- 97% of schools regarded the Scheme as a support to teaching and learning about healthy eating
- More than half of the schools surveyed (55%) had noticed an improvement in the ethos and atmosphere in the classes involved in the Scheme (Department of Health UK, 2003).

After the initial pilot scheme, the majority of schools reported that they would welcome help in developing a nutrition policy.

Sallis *et al.* (2003) implemented the **Middle School Physical Activity and Nutrition** (M-SPAN) programme: an environmental and policy intervention implemented in middle schools in the US. The intervention was grounded in a structural ecological model of health behaviour (Perry *et al.* 1996). The programme consisted of separate physical activity interventions and nutritional interventions. School staff and students were engaged in policy efforts, but there was no classroom health education. Parental education was delivered through school newsletters, posters and a brochure at Parent-Teacher Association (PTA) meetings. The intervention reported significant effects on physical activity and BMI in boys but

not in girls. The intervention was ineffective in reducing total and saturated dietary fat purchased at, or brought to, school.

Planet Health presented another school-based interdisciplinary intervention among youth, which was incorporated into the existing curriculum (Gortmaker *et al.* 1999). Planet Health targeted four behavioural changes:

1. Reducing television viewing to less than two hours a day
2. Increasing moderate to vigorous physical activity
3. Decreasing consumption of high fat foods
4. Increasing consumption of fruit and vegetables to at least five servings a day.

The four health goals were taught in a variety of ways in the 64 classroom lessons and PE classes. Results revealed that obesity prevalence among female students participating in the Planet Health programme was reduced compared with female students not receiving the programme (there was no observed effect on adiposity in boys). The number of television hours a day was reduced among both boys and girls participating in the programme. There was also some evidence to suggest that reductions in television viewing mediated the intervention effect in girls. An increase in fruit and vegetable consumption among girls was also reported.

1.5 GUIDELINES FOR THE DEVELOPMENT OF HEALTHY EATING POLICIES

In the development of a policy on healthy eating, the three stages of policy development should be applied to ensure an effective working document (Webb 1999):

1. Clarify the principles on which the policy will be based
2. Gain an understanding of the realities for children, adolescents and the families for whom the policy will affect
3. Draft and evaluate the policy to ensure that it's fulfilling its objectives

According to Webb (1999), in clarifying the principles, a bottom-up approach ensures complete participation and allows the policy to emerge from the identified needs and recommendations of parents, pupils and staff. A policy may cover the following areas:

- Brief background, which should include the name of school, pupil intake, date of policy, age range, review date, name of person responsible for drafting the policy and who was consulted
- A statement about how the school sees and values health and nutrition
- An outline of existing and potential programmes and policies within the school and the possible link to health and nutrition, for example 'The Green Flag Award'
- A statement about how the school body intends to deliver the programme or policy.

- Monitoring and evaluation procedures. The measures selected should be dependent on the objectives which have been identified and should be directly linked to these.

It is important to note, however, that an effective policy needs more than a simple policy statement. It requires the ongoing support and commitment of students, staff and parents to ensure that the policy is implemented and enforced (Schofield *et al.* 1993). As highlighted by Giles-Corti *et al.* (2004), engaging all stakeholders in policy development and gaining ongoing commitment to its implementation is critical to the success of policy.

1.6 CONCLUSION

As children are in school five days a week, 37 weeks per year, schools have the potential to play an influential role in promoting healthy eating patterns amongst children. Teaching staff reach young people at a crucial age of development during which lifestyles, including eating patterns, are developed, tested and adapted through social interactions within families, and with peers, teachers and other adults. As highlighted earlier, well-managed nutrition education programmes can bring about behaviour changes that contribute to nutritional health and well-being, whilst also improving children's learning potential and school attendance (World Education Forum 2000). The involvement of parents in this process has also proven to be significant.

2 *METHODOLOGY*



In 1999, the SEHB Health Promotion Department piloted a healthy lunch policy project entitled *Munch & Crunch*. The main aim of the project was to encourage and support primary schools in the development and implementation of a healthy lunch policy that would be unique to the needs of the school. It was also envisaged that the *Munch & Crunch* initiative would help educate teaching staff, students, and parents on the benefits of healthy eating in relation to health and learning potential, thus incorporating various aspects of social cognitive theory (Micucci et al. 2002).

2.1 RESEARCH STRATEGY

In January 2003, an evaluation was carried out to assess the overall progress and impact of the *Munch & Crunch* project. The evaluation was primarily quantitative in nature and reinforced with secondary data research and qualitative data in the form of semi-structured interviews. These methods were selected in order to gain insight into the topic being explored.

The main objectives of the evaluation were to:

- *Ascertain the percentage of schools with healthy lunch policies in the south east region of Ireland.*
- *Gain further information regarding the development, implementation and sustainability of healthy lunch policies within the school environment.*
- *To understand the various elements (i.e. the school curriculum, the wider community, school environment) that may impact upon the successful implementation of a school health promotion programme.*
- *Assess the overall impact and influence of the Munch & Crunch project in helping school management develop and implement a healthy lunch policy.*

2.2 SOURCES OF DATA

Data was traced via two main sources: the school principal and the teaching staff. The school principal tends to have the most influence with regard to policy development and implementation within the school. Consequently, in order to be successful, any programme or policy will require the support and interest of the principal. Primary school teachers administer the national curriculum and are directly responsible for implementing additional school policies within the classroom setting. They are also the main points of contact throughout the school, and play a crucial role in the process of a child's development, understanding and knowledge. Due to their close contact with the student body, it was understood that teachers should be able to provide information regarding the children's lunchtime eating habits. However, given the objectives of the evaluation, the questionnaires completed by the principals tend to form the basis of the study.

2.3 RESEARCH METHODS

2.3.1 SECONDARY DATA RESEARCH

In order to create an overall picture of developments within the area of nutrition, childhood obesity and health-promoting schools, a comprehensive review of government publications and existing primary research to date was carried out. As a result the research team was able to:

- Gain an in-depth knowledge as to the background, aims and objectives of the *Munch & Crunch* project
- Identify what research has been completed to date within Ireland, the UK and elsewhere in relation to the topic being explored
- Establish further criteria for the development of a survey questionnaire and topic guide.

2.3.2 THE QUESTIONNAIRE SURVEY

A draft questionnaire was developed and circulated for critical comment. A number of modifications and adaptations were made based on this consultative process, after which, the survey was administered to all 257 primary level schools in Wexford, Kilkenny and Waterford (see Table 2.0). South Tipperary and Carlow, although in the SEHB region, were not included in the initial phase of this research, primarily because a dietitian had not yet been appointed to South Tipperary, and the project had only just commenced in Carlow.

Within each school, teachers from both first and fifth class were asked to complete a questionnaire (see Appendix 3). First and fifth class teachers were chosen in order to determine if eating patterns were similar or significantly different between older and younger children. A similar questionnaire was also sent to each principal within the 257 primary schools. Questionnaires sent to principals, however, contained further questions in relation to school policy and implementation procedures, which will form the basis of this report (see Appendix 2). Both questionnaires contained open and closed questions.

Table 2.0
Total number of primary schools surveyed

Counties	Total Number of Schools	Percentage of Schools
Kilkenny	63	25%
Waterford	91	35%
Wexford	103	40%
Total	257	100%

2.3.3 ADMINISTERING THE QUESTIONNAIRE SURVEY

A letter (see Appendix 1), outlining the objectives and methods of the survey, and a copy of both sets of questionnaires (Appendices 2, 3) were sent out to the principal in each of the primary schools. A date of return was also emphasised. To ensure a high rate of return, a stamped addressed envelope was included. All returns were further entered into a draw for a €25 book token. The response rate for principals was 67% (n=173) and for teachers 45% (n=233). The teachers' questionnaires were also used to support/refute the responses made by school principals. Table 2.1 highlights the overall breakdown of questionnaires distributed and returned.

Counties	Principal		Teacher	
	Distributed	% Return	Distributed	% Return
Kilkenny	63	92% (n=58)	126	29% (n=36)
Waterford	91	60% (n=55)	182	61% (n=111)
Wexford	103	58% (n=60)	206	42% (n=86)
Total	257	67% (n=173)	514	45% (n=233)

2.3.4 QUALITATIVE DATA RESEARCH

The main aim of this section of the research was to obtain further information with regard to policy development, implementation, potential barriers and any further issues generated by the analysis of the data gathered through the questionnaire survey. Prior to interviewing, a number of pilot interviews were conducted using a variety of semi-structured interview topic guides. These pilot interviews aimed to establish procedures governing the interviews themselves in relation to duration, coverage of the wide range of experiences encountered and respondent reaction. Due to time and funding constraints, convenience sampling was employed, with the majority of interviews being carried out in schools in County Waterford.

2.3.5 CONDUCTING THE INTERVIEWS

A letter was sent to each principal in the Waterford region asking them to verify whether or not they had a healthy lunch policy and whether or not the principal would be willing to participate in an interview (see Appendix 1). Again, to ensure a high rate of return, a stamped addressed envelope was included. The returns were subsequently subdivided into the following three categories:

1. Written policy holders
2. Non-written policy holders
3. Not involved.

To capture a range of views, a number of interviewees were selected from each category. Those selected were subsequently contacted by telephone to arrange a time and place convenient to the interviewee.

All interviews were carried out in person, each lasting approximately 20-30 minutes. In spite of assurances of confidentiality from the research team, several of the interviewees did not wish for the interview to be recorded. On such occasions, detailed field notes were taken.

2.4 METHOD OF DATA ANALYSIS

The data collected from the questionnaire surveys was entered into a personal computer. MS Excel software package was used to process and analyse the data and compile visual graphics.

The coding of interview responses was done manually, following guidelines suggested by Delamont (1992), and Smith and Stewart (2001). The overall results were used to gain a deeper understanding on issues highlighted by the analysis of earlier data.

2.5 CONFIDENTIALITY

As interviewees were guaranteed full confidentiality, all names have been omitted from the quotes used throughout the report. In cases where the content of the quote was deemed by the researchers to be of a sensitive nature such quotes were also omitted. For purposes of clarity, all quotes from interviews will be presented in *blue italic* font.

3 RESULTS



The results of both the questionnaires and interviews will be discussed in relation to the overall objectives of the evaluation.

3.1 THE DEVELOPMENT OF A HEALTHY LUNCH POLICY WITHIN THE SCHOOL ENVIRONMENT

The school setting is deemed to be one of the most 'effective and efficient ways to reach large portions of the population, including young people, school personnel, families and community members' (Carter and Swinburn 2004, WHO 1995). If students can be reached at this influential stage of their life, when life long nutritional patterns are formed, then it may be possible for good eating patterns to extend into their everyday life and progress into adulthood. Hence it was reassuring to learn that over three quarters of the schools surveyed have a healthy lunch policy in place, with less than 12% stating that they have no policy in place (see Figure 3.0).

Those with a healthy lunch policy in place commented favourably in terms of overall reaction to its development and implementation. As one principal stated: *"The parents have never had a problem with it, and I have never received any communication in my time requesting that it be changed or made more or less strict"*. Another teacher similarly echoed this view: *"Most of the feedback on it is positive, it has been in the school for so long now that no-one has really questioned it"*.

Figure 3.0
Percentage of schools with a healthy lunch policy in place

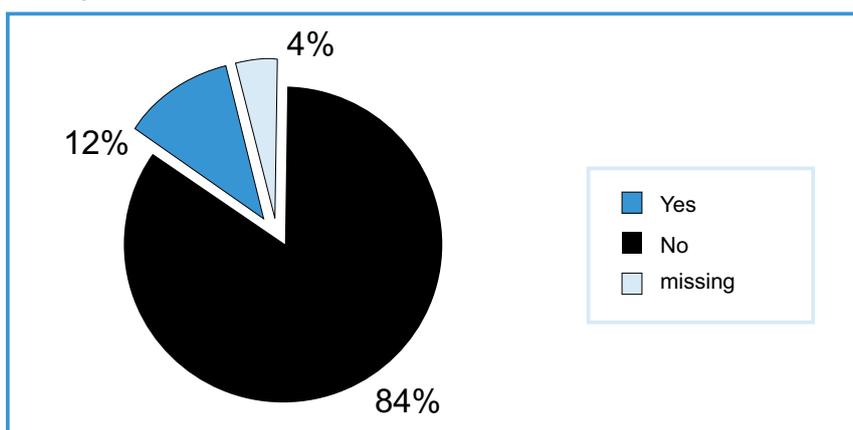


Table 3.0 highlights the type of feedback received by teachers and principals from parents in relation to the schools' healthy lunch policy:

Response	To Principal %	To Teachers %
No feedback from parents	16.6	25.2
Positive reaction to policy	68.3	60.8
Negative reaction to policy	4.1	1.6
Remainder: respondents failed to reply	11	12.4

3.2 BARRIERS TO IMPLEMENTING POLICY

Several reasons were outlined as to why some of the schools surveyed (12%) have no healthy lunch policy in place. The majority of principals with no policy in place referred to the level of parental resistance encountered when trying to develop and implement a healthy eating policy. One principal highlighted how *"We tried to ban crisps a couple of years back, but we experienced extreme resistance from a number of parents, some of whom were very vocal, and instead of giving their children one packet of crisps they would give them two, just to spite us"*; thus reflecting upon the importance of involving parents in the development and implementation of any policy.

Where possible, parents, in particular, should be involved in school nutrition interventions, especially when their input is critical to its success. Their input may be sought through school meetings, parent-teacher associations, open houses or formal presentations. As one principal commented, *"When we were formulating the policy it came mainly from the teachers and had the full backing from the Board of Management and the Parents' Association, we had very little opposition and generally speaking the parents welcomed the policy and we constantly keep the parents aware of it through newsletters and parent-teacher meetings"*. Involving parents in nutrition interventions at the primary school level has also been shown to enhance the eating behaviour of both students and parents (World Education Forum 2000).

It is also important to work with groups and individuals outside of the school who have an impact on students' knowledge, attitudes and behaviours related to eating. Potential partners from outside the school environment might include local shopkeepers, community youth services, sports figures, vendors and local media. Only 2% of those surveyed, however, have worked in collaboration with local businesses in terms of promoting healthy eating. School management need to be aware that such partnerships could lead to further pathways to help develop and sustain healthy eating practices and other health promoting issues within the school environment (Centre for Disease Control 1997, WHO 1995).

Some of those surveyed also referred to the fact that they had too many policies/programmes in place and that implementing and enforcing a healthy lunch policy was simply too great a work load for members of staff. Others simply felt that it was not the responsibility of the school to dictate what people can and cannot have for lunch. As one principal stated when interviewed: *“We can certainly discourage unhealthy eating habits, but we can’t actively ban them, we can’t infringe on basic human rights. That would simply be a legal mine-field.”* Another principal expressed how they had more pressing issues to contend with: *“Healthy eating is not high on our list of priorities due to the amount of bullying within the school.”*

3.3 NATURE AND IMPLEMENTATION OF A HEALTHY LUNCH POLICY

As Table 3.1 clearly outlines, almost 90% of healthy lunch policies within the schools surveyed are based on the promotion of healthy eating within the school. This, combined with the prohibition of sweets, crisps and carbonated drinks, establishes the backbone to successful healthy eating policies within schools.

Nature of the policy	Results
Promoting healthy eating	89%
Prohibiting sweets	46.2%
Prohibiting crisps	55.9%
Friday ‘treat’ day	19.3%
Promoting fruit	64.1%
Prohibiting carbonated drinks	56.6%

Over half of those surveyed remarked positively in terms of the overall implementation of the policy, and made reference to various approaches to ensure the successful implementation of the policy (See Figure 3.1). Such approaches include:

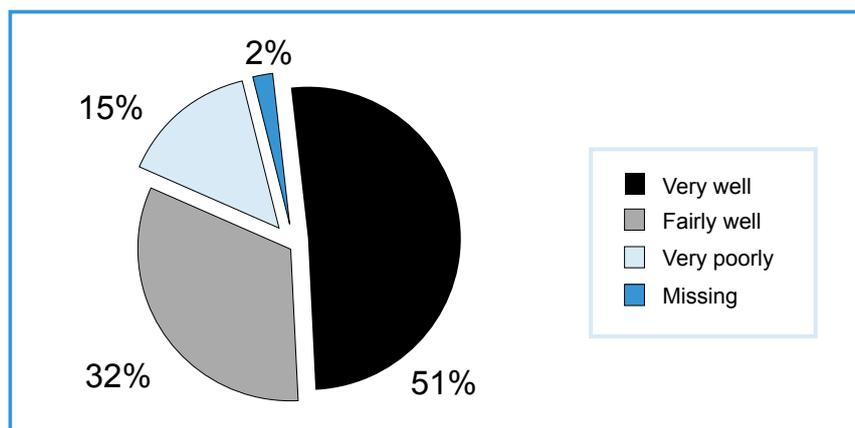
- The enforcement of strict rules
- Disciplinary action or removal of sweets without penalty
- The encouragement of healthy foods
- Incentives given to promote healthy eating

When referring to the encouragement of healthy foods, one principal stated how encouragement was simply *‘the name of the game’*: *“We prefer to encourage the students to adopt healthy eating habits rather than making it mandatory. I prefer to adopt a positive reinforcement approach and the children I feel are certainly more receptive to such an approach, we do also have a reward system where we*

give the students vouchers for various acts of good behaviour this seems to help motivate and encourage them. Another principal stated how *“There is a very thin line between dictatorship and encouragement, you can’t actually dictate to anyone about what their child eats, but you can encourage them and educate them on the benefits of healthy eating”*. One in five of those surveyed confiscated foods until three o’ clock, and occasionally letters were sent home to parents if ‘junk food’ was brought to school on more than two occasions, or alternatively, talks were given to the students on the importance of healthy eating. It is clear that a combination of encouragement and education are approaches favoured by the majority of schools, which corresponds positively with the advocated method of the South Eastern Area’s Health Promotion Department.

Fourteen point five percent, however, stated that their healthy lunch policy was rather poorly implemented within the school, which, although not stated, may be due to such factors as parental resistance, poor staff resources or a lack of student participation.

Figure 3.1
Policy implementation



The principals in a large number of schools also referred to the problem of implementing a healthy lunch policy and sustaining it amongst children from disadvantaged areas. Several of the principals interviewed expressed how children from disadvantaged backgrounds arrive at school having had no breakfast and sometimes with no lunch, thus making it very difficult to dictate what foods children should or should not bring to school. As one teacher highlighted, *“We have some kids who might be lucky enough to bring a packet of chewing gum with them for lunch”*. Another principal also commented on how *“...there are a number of children coming to school with nothing and we are aware and conscious of it...”* Some individual schools have set up breakfast and lunch clubs that entitle the children to bread and milk. Other schools have also established a rapport with people from within the community who make sandwiches for the school that are then offered to the children. The milk scheme, which is well established in a number of schools has also helped, as it does not isolate those from disadvantaged backgrounds, primarily because the whole school avails of it.

3.4 SUSTAINING A HEALTHY LUNCH POLICY WITHIN THE SCHOOL ENVIRONMENT

In order to sustain a healthy lunch policy various strategies appear to be employed within the schools, all of which are captured in Table 3.2. The most popular strategies mirror the ideals behind the *Munch & Crunch* project.

Strategies	Always	Sometimes	Don't use	Unanswered
Written school rule	54.5%	4.8%	10.3%	30.4%
Nutrition education aimed at pupils	49.7%	33.8%	0%	16.5%
Informing parents through newsletters	35.2%	33.8%	4.8%	15.2%
Pupils suggestion box	31.7%	33.8%	7%	55.8%
Parents meeting	20%	33.8%	10.3%	32.5%
Unannounced lunchbox checks	12.4%	33.8%	11.7%	34.5%
Healthy eating week / Theme day	9%	33.8%	14.5%	48.2%
Informing pupils through notice boards and monthly newsletter	5.5%	33.8%	20%	46.9%
Competition	4.1%	33.8%	18.6%	54.5%

The following quotes highlight the different methods used by various schools:

"Our policy started about 12 years ago, it stemmed out of litter control and it ended up with the banning of crisps, but rather than being anti-crisps we promoted healthy lunches"

"Our policy is incorporated into a lot of our other policies including discipline and health and safety, from the inaugural meeting with the infants, parents are informed that we try and promote healthy eating"

"In terms of sustaining the policy we have combined it with the Green Flag and early breakfast policy, we have also incorporated the notion of healthy eating with S.P.H.E. and environmental studies which has certainly increased awareness among the children".

To ensure sustainability, it has been advised that the various components of the intervention should be incorporated into the school curriculum and a school environment created that is conducive to promoting healthy weight (Giles-Corti *et al.* 2004). Addressing healthy eating through the school curriculum is discussed later in the report.

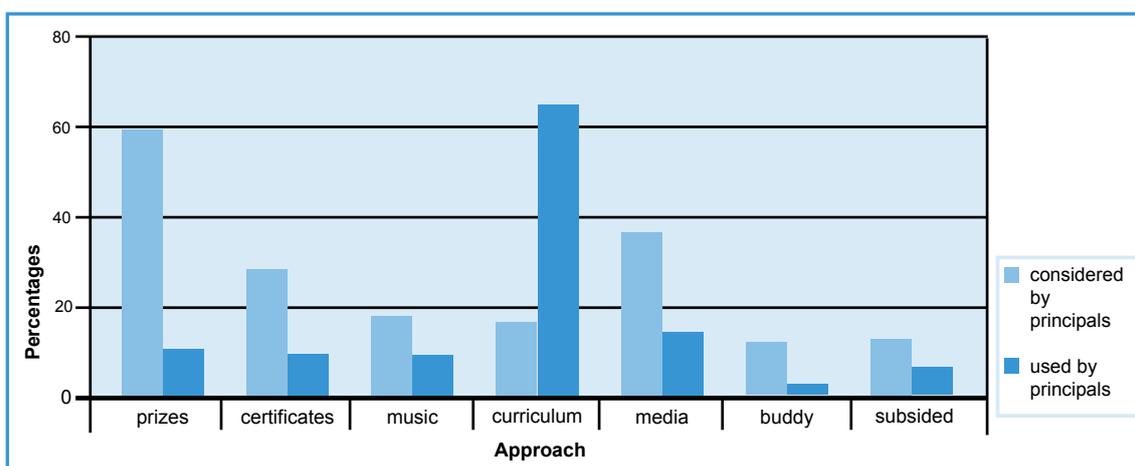
The possible reasoning behind the large variety of strategies used may be attributed to the structure of schools and available resources, which can differ greatly depending on size and location; hence the importance of formulating a healthy lunch policy that is unique to the needs of the school.

It is important to note the number of schools that use pupil suggestion boxes (32%) as a strategy to help sustain healthy lunch policies. Whilst consulting students is to be commended, it is worth highlighting that such a strategy is only effective when it is meaningful, and not simply a tokenistic gesture.

The overall lack of student consultation and involvement within the development of healthy lunch policies is quite striking. Analysis of results shows that in the majority of the primary schools with a healthy lunch policy the policy was written by the 'principal and teachers' (53.1%) or by the 'principal, teacher and parents' (31.7%): *"When we were formulating the policy it had full backing from the Board of Management and the Parents' Association... it's because of this I feel we had very little opposition"*. It would appear that little, if any, of the overall consultation process in any of the schools surveyed captured or incorporated the views of the student; which is wholly inconsistent with the 'whole child perspective' advocated in the National Children's Strategy: Our Children – Their Lives (Department of Health and Children 2000b). Evidence based practice also confirms that the active participation and involvement of pupils in a project has considerable and long term benefits. By engaging pupils as participants, and consulting with them on a regular basis, schools tend to find that attitudes and behaviour are improved (World Education Forum 2000).

School principals were also asked to identify the most appropriate incentives to encourage pupils to adhere to a healthy lunch policy. The following figure presents an overview of their responses:

Figure 3.2
Strategies considered and used to sustain a healthy lunch policy



As can be seen in Figure 3.2, 'As part of their curriculum' was cited by over 60% of principals as the most effective tool in developing and sustaining a healthy lunch policy, whilst nearly 40% believed prizes and competitions would also be a useful approach. One teacher commented on how *"the idea of prizes and competition is something that seems to motivate and encourage them to adopt healthy eating habits"*. This school, in particular, has worked in partnership with a local board game manufacturer who has given the school a number of board games as spot prizes for the children.

Other suggestions made by both principals and teachers included video presentations and guest speakers: *"It might also be a good idea to have a guest speaker to come visit the school... sometimes I think the girls think I'm making all these rules up for the fun of it and that these are my recommendations. Sometimes it is good for them to hear things from a neutral party, from someone outside of the school environment"*. A subsidised milk scheme or mini-lunch from a local shop was also mentioned: *"We will also be looking more into developing the Lunch Club and perhaps developing some sort of partnership with the local shopkeeper, where he might prepare a special lunch for the kids and perhaps we can help target healthy eating in that respect"*. A number of teachers and principals also felt the need for greater visual stimulation. The following quote from a school principal reflects this sentiment: *"There's a need for greater visual stimulation to increase nationwide levels of awareness, why not increase the amount of nationwide advertising through RTE or whatever... there needs to be greater amounts of visual stimulation targeting several social institutions and not just the school environment"*. Such suggestions highlight the potential benefits in collaborating with the wider community. Similar findings, as those presented in Figure 3.2, were also recorded amongst teachers.

3.5 IMPACT OF A HEALTHY LUNCH POLICY

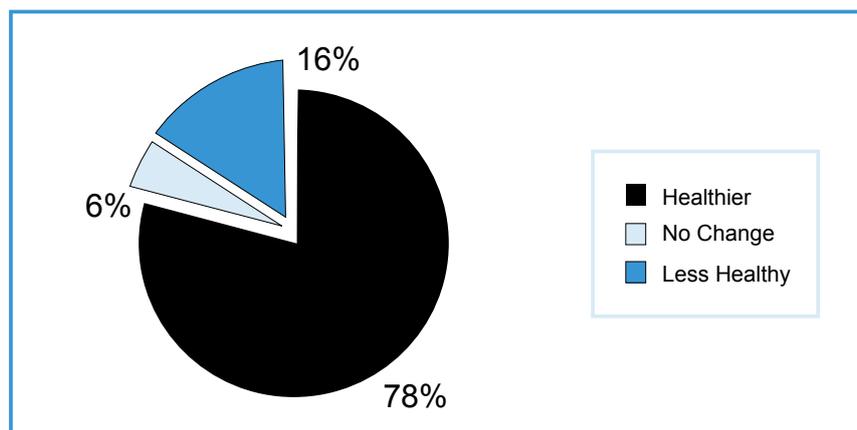
The change in terms of the nutritional quality of the lunches being brought to school since the development and implementation of healthy lunch policies within schools in the south east region has been positive. Over three quarters of those with a healthy lunch policy have seen an increase in the nutritional content of lunch boxes (see Figure 3.3). As one principal commented: *"As far as I can see there has been an increase in the number of properly made sandwiches and fruit consumed at lunch-time. I'm also surprised at the number of kids drinking water instead of fizzy drinks for lunch"*. Teacher's responses were broadly similar to those of their respective school principals (82% with positive change and 4% with no change).

When asked to elaborate on the change in the nutritional quality of lunches, the following comments were made:

- Younger children seem to adhere more to healthy eating guidelines compared to older children

- Less tooth decay and hyperactivity in children is evident
- One teacher highlighted how *"...the kids have probably become more aware of a variety of stuff that is considered good and healthy. When we started there wasn't too many things that they could eat, only fruit and bread, now you have different things like 'actimel' yogurts, stringy cheeses, there's an amazing variety of things for them"*.

Figure 3.3
Change in the nutritional quality of lunches after the introduction of a healthy lunch policy



3.6 EVALUATION OF A HEALTHY LUNCH POLICY

Evaluation is a critical element of any school-based programme. It is initiated at the onset of the implementation process when needs are assessed, objectives set and activities planned. Evaluation is necessary to monitor the process in order to make adjustments or modifications to a programme where needed. The evaluation of healthy lunch policies in schools should be ongoing.

During the interview process, principals were asked if they had evaluated their health lunch policy, and if so, how did they evaluate it. The majority of schools, however, had not carried out a formal evaluation of their policy, although they did claim to regularly assess it to see if it was being implemented and adhered to. Some of the principals commented on the fact that they check the bins to see what litter is being thrown out. Many school bodies also used staff and parent teacher meetings to address any concerns or issues with the healthy lunch policy.

3.7 SCHOOL CURRICULUM

As highlighted earlier in the report, incorporating healthy lunch policies into the school curriculum is essential to ensure sustainability. Health and health related issues are becoming increasingly important within the structure of the Irish school curriculum and in 1999 a new subject called Social, Personal and Health Education (SPHE) was developed. SPHE supports the personal development, health

and well-being of young people, and helps them create and maintain supportive relationships. The recommended time allocation for SPHE is one class period per week or equivalent. It should be noted, however, that while this is the ideal it might not always be the reality. While health education has always been covered within the school curriculum, it has now been given a formal structure that is reflective of the changing nature of society.

The aims of SPHE are to:

- Enable the students to develop skills for self-fulfillment and living in communities
- Promote self-esteem and self-confidence
- Enable the students to develop a framework for responsible decision-making
- Provide opportunities for reflection and discussion
- Promote physical, mental and emotional health and well-being.

3.7.1 ADDRESSING HEALTHY EATING THROUGH THE SCHOOL CURRICULUM

When asked if there was time devoted to creating awareness of healthy eating: 91% of school principals reported positively. As one principal expressed: *"We have had information packs for the last three or four years, we have correspondence from the dentist, and visits by people from the Health Board, we also have posters. We have integrated that type of thing into our general curriculum like healthy eating, but it is all more formally done now with the introduction of SPHE, it is a requirement"*. Two percent of those surveyed, however, reported that no time was devoted to creating such awareness around healthy eating, a finding similar to that reported by the teachers.

Table 3.3 records the various subjects wherein healthy eating is addressed. It is worth noting that according to the principals, healthy eating is addressed in both SPHE and Environment and Education, but this is not reinforced by the teacher's survey findings. In addition, during SPHE in-service training for primary school teachers, which was delivered in 2001, it was also suggested that the topic of food and nutrition could be incorporated into the majority of subjects in the curriculum. The degree to which this is practiced within the school setting, however, is beyond the scope of this study.

Subject	Teacher %	Principal %
SPHE	93	80
Environment and Education	-	3
Health Education	-	4
Other (e.g. throughout the curriculum, assembly)	7	13

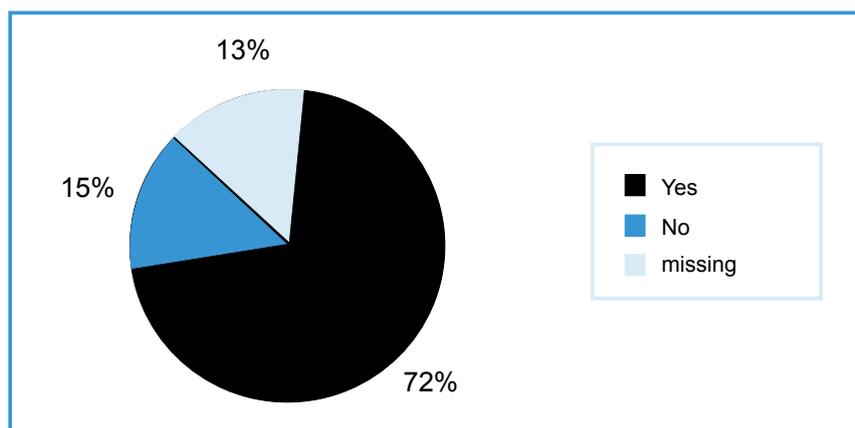
Principals and teachers were then asked how frequently healthy eating was addressed within their schools. Table 3.4 outlines the overall results.

Frequency	Daily	Weekly	Monthly	Yearly	Missing
Principal %	4.8	23.4	37.9	12.4	21.5
Teacher %	5.6	27.6	48.4	15.2	3.2

These results clearly indicate that healthy eating is an area that is regularly addressed within a large majority of schools. The depth of coverage, however, was not determined.

3.8 INFLUENCE OF THE *MUNCH & CRUNCH* PROJECT

Figure 3.4
The influence of *Munch & Crunch* on school policy



When asked whether or not the overall components of the *Munch & Crunch* project influenced school policy, the overall response was extremely positive. Seventy-two percent indicated that the *Munch & Crunch* initiative had influenced their policy compared to 15% who didn't believe it influenced their policy. Thirteen percent of principals failed to answer the question (Figure 3.4).

Table 3.5 highlights the means by which the *Munch & Crunch* initiative has influenced school policy.

Provided the impetus for a school policy	38.6%
Helped develop a formal written policy	29.7%
Supported the school in sustaining the policy	42.1%

Principals did, however, stress that staff support is vital in terms of implementing and sustaining a healthy lunch policy. Despite initiatives such as *Munch & Crunch*, if teaching staff are not fully supportive of nutrition interventions such policies can be very difficult to enforce and monitor. As one principal highlighted: *“I would only implement a policy if the teachers were fully supportive of it; as yet they haven’t shown any interest so I am not going to do anything about it... there is no point in me trying to implement policies in the school when they are not behind them”*. Another principal expressed how *“We’ve had considerable support from teachers both collectively and individually, which is essential... it definitely has to be a team thing within the school, all the teachers must support it or difficulties are bound to arise”*.

All principals and teachers commented favourably upon the use of posters and leaflets accompanying *Munch & Crunch*. The use of such posters and leaflets, and the availability of a dietitian to speak to the Parent’s Association and staff if required, has also helped to sustain the policy within the school.

During the interviews it also emerged that teachers and principals who were aware of *Munch & Crunch*, but were not involved in that particular initiative, still promoted and encouraged healthy eating within the school environment, although they did not necessarily formulate a healthy lunch policy. The following quote reflects this: *“I have no problem making the kids aware of the issues and educating them in terms of healthy eating, but I am just not going to tell them what they can or cannot eat”*.

3.9 SUPPORT REQUIRED TO DEVELOP AND SUSTAIN A HEALTHY LUNCH POLICY

School principals were asked to identify means by which the Health Promotion Department might support their school in the promotion of healthy eating. Videos, classroom worksheets and information leaflets for parents ranked highest among most schools. One teacher commented on how *“yes, we received adequate support, but I would like to see larger posters and perhaps a video, some sort of visual stimulation”*. A principal echoed this view: *“Perhaps develop a resource pack with large posters, stickers, leaflets and educational games, that sort of thing... something that both the teachers and pupils can work with”*. A CD-ROM, A2 posters promoting healthy lunches, worksheets in Irish and visits by dietitians and health professionals were also mentioned as possible effective tools. Similar sentiments were expressed by teachers in the schools surveyed.

The final question within the survey gave school principals and teachers an opportunity to add any further comments in relation to the development and implementation of healthy eating and healthy lunch policies. General comments included:

- Most of the families follow the school's healthy lunch policy.
- Most children are happy to adopt healthy eating patterns when supported at home and at school. As one principal highlighted: *"I do feel, however, that it's a bit of a contradiction when the teachers within the school are teaching the children the benefits and importance of healthy living and eating habits if the parents are going to go against such teaching by giving children unhealthy snacks going to school"*. This may reflect upon the need to involve and educate parents from the onset. Often by being involved parents feel less threatened and are thus less likely to 'go against' such teaching.
- Litter levels have also reduced as a result.
- Large classes make it difficult to monitor children's lunches.
- All teachers, both individually and collectively, must be interested in promoting healthy eating. The following quote reflects this attitude: *"Promoting the likes of healthy eating, however, definitely has to be a team thing within the school, all the teachers must support it or difficulties are bound to arise."*
- It can be difficult to account for those who go home for lunch and might stop in the shop on the way back to school.

4 CONCLUSION



Evidence suggests that a school-based healthy eating intervention programme has the potential to promote an awareness of healthy eating and have a positive effect on a pupil's behaviour. The key, however, to a successful school health-promoting programme is 'partnership' (i.e. working with parents, school staff, children and local health care practitioners collectively). *Munch & Crunch* has worked towards achieving a balance between these groups by publishing literature and materials applicable to all concerned. It has also encouraged all groups to work together to help formulate a policy that would reflect the needs of the individual schools, although the development of links with local businesses still has potential for further exploration.

This report clearly shows that healthy eating has become integrated into the philosophy and curriculum of the majority of schools in the south east region of Ireland, as the number of both formal and non-formal healthy lunch policies has increased due to the project. Results further indicate that 72% (Figure 3.4) of the schools surveyed have been influenced by the *Munch & Crunch* project. It would also appear that, if advocated by the school body and supported by parents, school going children are willing to abide by a healthy lunch policy, particularly those within the junior cycle.

This report also highlights the fact that *Munch & Crunch* has been valuable in helping to create awareness of the importance and benefits of healthy eating. Those schools not involved in the programme cited other pressing issues such as bullying, the disadvantaged nature of the student population, and the lack of parental support for the project as reasons for non-involvement, as opposed to a non-belief in the benefits of such an initiative. Overall, it would appear that *Munch & Crunch* has helped to increase awareness and expand the emphasis on health promotion and healthy eating in schools. With a continued programme already in existence it is the intention of the Health Services Executive, South Eastern Area, formally known as SEHB, to improve upon that.

5 RECOMMENDATIONS



In an attempt to improve upon and strengthen the position of healthy eating within the school environment, and in light of the data presented above, both teachers and principals have proposed the following recommendations:

- Increased information for schools in the form of leaflets, handouts, equipment and materials (e.g. a resource pack); thus enabling the schools to develop, implement and improve their knowledge of health and nutrition. It was also emphasised that the current posters being used could be somewhat larger in size and laminated to withstand the rigours of the school environment.
- In order for a healthy eating initiative to be effective it has to have parental backing; hence, parental involvement is vital to the success of any project/policy.
- The Health Promotion Department needs to consider promoting the initiative more effectively, and should also make more personal contact with the schools. It should be noted, however, that until 2002 there was only one dietitian in the SEHB to cover over 400 schools.
- A dietitian with responsibility and authority at national, district and local level to deal with health and nutrition issues and plan interventions would be of enormous benefit. This is particularly important for smaller rural and urban schools where resources and time are often extremely limited.
- The development of an interactive healthy eating website has also been suggested by a number of teachers and principals. Visual stimulation has been proven to be an effective teaching and learning technique.
- Increased community partnership. Community involvement of local shops, chain stores, and businesses can increase awareness and help promote a healthy lifestyle, both at school and in the home.
- Increased connectivity between teachers; ongoing and focused professional development; and embracing and implementing change within schools.
- Further research to examine children's and parent's attitudes and opinions in relation to healthy eating policies and programmes within the school setting is also recommended.

REFERENCES



- American Academy of Pediatrics (2004). Policy Statement – Soft Drinks in Schools. *Paediatrics* **113**: 152-4.
- Borra S.T, Kelly L., Shirreffs M.B., Neville K., Geiger C.J. (2003). Developing health messages: Qualitative studies with children, parents, and teachers help identify communications opportunities for healthful lifestyles and the prevention of obesity. *Journal of the American Dietetic Association* **103(6)**: 721-8.
- Broderick D., Shiel G. (2000). Diet and Activity Patterns of Children in Primary Schools in Ireland. Saint Patrick's College, Dublin.
- Burns C., Harrison M., Heslin J., McGuinness M., (2004). Switch Off-Get Active, Pilot Project Evaluation Report. Public Health Department, South Eastern Health Board, Health Promotion Department, South Eastern Health Board and Centre for Health Behaviour Research, Waterford Institute of Technology.
- Butriss J.L. (1997). Food and nutrition: attitudes, beliefs and knowledge in the United Kingdom. *American Journal of Clinical Nutrition* **65 (6s)**: 1985S-95S.
- Carter M.A. and Swinburn B. (2004). Measuring the 'obesogenic' food environment in New Zealand primary schools. *Health Promotion International* **19(1)**: 15-20.
- Cashel K.M., Crawford D., Deakin V. (2000). Milk choices made by women: what influences them, and does it impact on calcium intake? *Public Health Nutrition* **3(4)**: 403-10.
- Centre for Disease Control (1997). Guidelines for school health programs to promote lifelong healthy eating. *Journal of School Health*, **67**: 9-26.
- Coates T.J, Barofsky I., Saylor K.E., Simons-Morton B., Huster W., Sereghy E., Straugh S, Jacobs H., Kidd L. (1985). Modifying the snack food consumption patterns of inner city high school students: the Great Sensations Study. *Preventative Medicine* **14(2)**: 234-47.
- Coon K.A. and Tucker K.L. (2002). Television and children's consumption patterns. *Minerva Pediatrica* **54**: 423-36.
- Crespo C.J., Smit E., Troiano R.P., Barlett S.J., Macera C.A., Andersen R.E. (2001). Television watching, energy intake, and obesity in US children: Results from the third National Health and Nutrition Examination Survey, 1988-1994. *Archives of Paediatric and Adolescent Medicine* **155(3)**: 360-5.
- Delamont S. (1992). Fieldwork in educational settings: Methods, pitfalls and perspectives, London: Falmer Press.
- Department of Health UK (2003). A study into parents and teachers views of National School Fruit Scheme. Prepared by NOP World Consumer on behalf of the Department of Health. NOP Ref: 435314
- Department of Health and Children (2000a). The National Health Promotion Strategy 2000-2005. The Stationery Office, Dublin.
- Department of Health and Children (2000b). The National Children's Strategy: Our Children – Their Lives. The Stationery Office, Dublin.
- Ebbeling C.B., Pawlak D.B., Ludwig D.S. (2002). Childhood Obesity: public-health crisis, common sense cure. *Lancet*, **360**: 473-82.

- Fagot-Campanga A., Pettit D.J., Engelgau M.M., Burrows N.R., Geiss L.S., Valdez R., Beckles G.L., Saaddine J., Gregg E.W., Williamson D.F., Narayan K.M. (2000). Type 2 diabetes among North American children and adolescents: an epidemiologic review and a public health perspective. *Journal of Pediatrics* **136(5)**: 664-72.
- Flynn MAT (1997). Fear of fatness and adolescent girls: Implication for obesity prevention. *Proceedings of the Nutrition Society*. **56**: 305-17.
- Friel S., Kelleher C., Campbell P., Nolan G. (1999). Evaluation of the Nutrition Education at Primary School (NEAPS) programme. *Public Health Nutrition*. **2(4)**: 549-55.
- Garaulet M., Martinez A., Victoria F., Perez-Llamas F., Ortega R.M., Zamora S. (2000). Difference in dietary intake and activity level between normal-weight and overweight or obese adolescents. *Journal of Pediatric Gastroenterology and Nutrition*. **30(3)**:253-8.
- Gilbody S.M., Kirk S.F., Hill A.J., (1999). Vegetarianism in young women: another means of weight control? *International Journal of Eating Disorders* **26**: 87-90.
- Gillman M.W., Rifas-Shiman S.L., Frazier A.L., Rockett H.R., Camargo C.A. Jr., Field A.E., Berkey C.S., Colditz G.A., (2000). Family dinner and diet quality among older children and adolescents. *Archives of Family Medicine* **9(3)**: 235-40.
- Giles-Corti B., English D.R., Costa C., Milne E., Cross D., Johnston R.(2004). Creating SunSmart schools *Health Education Research*. **19(1)**: 98-109.
- Glanz K., Lankenau B., Foerster S. Temple S., Mullis R., Schmid T. (1995). Environmental and policy approaches to cardiovascular disease prevention through nutrition: opportunities for state and local action. *Health Education Quarterly*. **22(4)**: 512-27.
- Gortmaker S.L., Peterson K., Wiecha J., Sobol A.M., Dixit S., Fox M.K., Laird N. (1999). Reducing obesity via a school based interdisciplinary intervention among youth: Planet Health. *Archives of Pediatric and Adolescent Medicine* **153(4)**: 409-18.
- Hannon E, Walton J, Walsh E, Moloney R, O'Farrell D. (2005). Key findings from the National Children's Food Survey. Presented at National Children's Food Survey RELAY Workshop, 19/5/05, St. James Hospital, Dublin 8. www.iuna.net www.relayresearch.ie
- Harnack L., Stang J., Story M. (1999). Soft drink consumption among US children and adolescents: nutritional consequences. *Journal of the American Dietetic Association* **99**: 436-41.
- Hastings G., Stead M., McDermott L., Forsyth A., Mackintosh A.M., Rayner M., Godfrey C., Caraher M., Angus K. (2003). Review of research on the effects of food promotion to children. Final Report. Food Standards Agency: London.
- Irish Universities Nutrition Alliance (2001). Special Issue. North/South Food Consumption Survey. *Public Health Nutrition* **4 (5A)**.
- Kelleher C., Nic Gabhainn S., Friel S., Corrigan H., Nolan G., Sixsmith J., Walsh O., Cooke M. (2003). The National Health and Lifestyle Surveys: Survey of Lifestyle,

Attitudes and Nutrition (SLÁN 2002) and the Irish Health Behaviour in School-Aged Children Survey (HBSC). Centre for Health Promotion Studies, NUI Galway & The Department of Public Health Medicine and Epidemiology, UCD.

Ludwig D.S., Peterson K.E., Gortmaker S.L. (2001). Relationship between consumption of sugar-sweetened drinks and childhood obesity: a prospective, observational analysis. *Lancet* **357**: 505-08.

McCarthy S., O'Neill J., O'Brien D. (2005). Obesity and physical activity in Irish Children. Presented at National Children's Food Survey RELAY Workshop, 19/5/05, St. James Hospital, Dublin 8. www.iuna.net www.relayresearch.ie

Micucci S., Thomas H., Vohra J. (2002). The effectiveness of school based strategies for the primary prevention of obesity and for promoting physical activity and/or nutrition, the major modifiable risk factors for type 2 diabetes: a review of reviews. City of Hamilton, Social and Public Health Services Department, Public Health Research, Education and Development Program, Effective Public Health Practice Project. Ontario.

Murphy J.F.A. (2001). The need for an obesity taskforce. *Irish Medical Journal* **94(3)**: 68.

National Health and Medical Research Council (NHMRC) (2003). Dietary Guidelines for Children and Adolescents, Infant Feeding Guidelines (Draft), Online ISBN 1 86496 0647.

National Nutrition Surveillance Centre (2001). Oral Health in Disadvantaged Schools in the Eastern Region. Dental Health Foundation, Dublin.

National Taskforce on Obesity, (2005). Obesity the Policy Challenges – the Report of the National Taskforce on Obesity, Dublin.

Nolan G., Murrin C.M., Shiely F., Corrigan H., NicGabhainn S., Friel S., Kelleher C.C., (2004) Consumption patterns of junk foods in young Irish people in relation to body mass index. *Proceedings of the Nutrition Society* (In press).

Neville L., Thomas M., Bauman A. (2005). Food advertising on Australian television: the extent of children's exposure. *Health Promotion International* **20(2)**: 105-12.

O'Connor E., Friel S., Kelleher C. (1997). Fashion consciousness as a social influence on lifestyle behaviour in young Irish adults. *Health Promotion International* **12**: 135-9.

Perry C.L., Luepker R.V., Murray D.M., Kurth C., Mullis R., Crockett S., Jacobs D.R. Jr. (1988). Parent involvement with children's health promotion: the Minnesota Home Team. *American Journal of Public Health*. **78(9)**: 1156-60.

Perry C.L., Williams C.L., Mortenson S.V, Toomey T.L., Komro K.A., Anstine, PS, McGovern PG, Finnegan JR, Forster JL, Wagenaar AC, Wolfson M. (1996). Project Northland: Outcomes of a Community wide Alcohol Use Prevention Program during Early Adolescence. *American Journal of Public Health*, **86**: 956-965.

Robinson, T.N. (1995). Ethnic and gender differences in the relationship between television viewing and obesity, physical activity and dietary fat intake, *Journal of Health Education*, **26**: 91S-8S.

- Ryan Y.M., Gibney M.J., Cantwell M., Johnson M., Flynn M. (1997). Weight perceptions, slimming practices and nutrients intakes of Irish adolescent girls. *Proceedings of the Nutrition Society* **56**: 50A-52A.
- Ryan Y.M., Gibney M.J., Flynn M.A. (1998). The pursuit of thinness: a study of Dublin schoolgirls aged 15y. *International Journal of Obesity and Related Metabolic Disorders* **22(5)**: 485-7.
- Sallis J.F., McKenzie T.L., Conway T.L., Elder J.P., Prochaska J.J., Brown M., Zive M.M., Marshall S.J., Alcaraz J.E. (2003). Environmental interventions for eating and physical activity: a randomized controlled trial in middle schools. *American Journal of Preventative Medicine* **24(3)**: 209-17.
- Schofield M., Coxall A., Sanson-Fisher R. (1993). Skin cancer: do early childcare centres provide protection? *Health Promotion International* **8**: 243-7.
- Smith, A. and Stewart, B. (2001). Beyond number crunching: Applying qualitative techniques in sport marketing research *The Qualitative Report*, **6** (2). Retrieved from the World Wide Web <http://www.nova.edu/ssss/QR/QR6-2/smith.html>
- Visscher, T.L. and Seidell J.C. (2001). The public health impact of obesity. *Annual Reviews in Public Health* **22**: 355-75.
- Warren J.M., Henry C.J., Lightowler H.J., Bradshaw S.M., Perwaiz S. (2003). Evaluation of a pilot school programme aimed at the prevention of obesity in children. *Health Promotion International* **18(4)**: 287-96.
- Webb, R. (1999). Public Policy on children's play in Ireland: An Examination of Central and Local Government Policies on Children's Play in Public Areas. The Children's Research Centre, Trinity College Dublin.
- Whitaker R.C., Wright J.A., Pepe M.S., Seidel K.D., Dietz W.H. (1997). Predicting obesity in young adulthood from childhood and parental obesity *New England Journal of Medicine* **337**: 869-73.
- Woods C., Foley E., O'Gorman D., Kearney J., Moyna N. (2004). The Take PART Study: Physical Activity Research for Teenagers. A report for the East Coast Area Health Board by Centre for Sport Science and Health, Dublin City University.
- World Education Forum (2000). Education for All 2000 Assessment. Thematic study on health and nutrition. United Nations Educational, Scientific and Cultural Organisation (UNESCO). Retrieved on the World Wide Web www.unesco.org/education/efa
- World Health Organisation (1995). Global School Health Initiative, What is a health promoting school. Retrieved from the World Wide Web, June 2004, http://www.who.int/school_youth_health/gshi/en/
- World Health Organisation (1996). The Ottawa Charter for Health Promotion, WHO, Geneva.
- World Health Organisation (1997). The Jakarta Declaration on Leading Health Promotion into the 21st Century, WHO, Geneva.
- World Health Organisation (2003). Diet, nutrition and prevention of chronic diseases. Report of a joint WHO/FAO expert consultation. WHO. Geneva (WHO Technical Report Series, No. 916).

Munch & Crunch

Healthy Lunch Project

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