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MSc Nutrition and Dietetics

Barriers to healthy eating and the prevention of overweight and obesity: a qualitative study of sixth form student's perceptions

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February 2012

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Abstract

Aims This study aimed to elicit the views of sixth form students on barriers to healthy eating and the prevention of overweight and obesity. It explores the kind of interventions that should be in place to support them to make healthier choices and also considers the type of services that should be available for those who are overweight or obese.

Design This study used qualitative research through conducting 4 focus groups in sixth form college settings. A topic guide was developed for use in the focus groups. Focus groups were audio recorded and transcribed verbatim. Thematic content analysis was used to identify key themes and sub themes.

Subjects 4 focus groups were conducted in 3 college settings, with a total of 25 participants, 18 females and 7 males aged between 16 and 19. 11 participants were studying A levels, 3 were studying BTEC's and 11 were studying vocational courses.

Findings Whilst participants could define a healthy diet, they did not appear to endeavour to meet these guidelines. There was recognition of the long term health consequences of a poor diet, but this did not have a strong influence food choice in the here and now.

Cost appeared to be the biggest barrier to healthy eating and this related to both within and external to, the college environment. The role of parents and college seem to have

the greatest influence on facilitating healthy eating. There were clear and consistent views about what support they would like in college; water, more information on foods served in the canteen and inputs in tutorials. In relation to treatment services, participants felt that these should be located outside of college and be young person friendly.

Conclusions Young people in general are aware of the components of a healthy diet; however knowledge does not appear to be enough to facilitate behaviour change. Whilst colleges are taking steps to become healthier settings, there is more that could be done, namely; provision of free drinking water, nutritional information on food available at college, better use of tutor time for healthy eating information and practical cookery skills. Any treatment services should be young person friendly, specific to this age group, delivered by individuals with experience of working with young people and offered outside the college setting.

Declaration

“I hereby declare that work contained herewith is original and is entirely my own work (unless indicated otherwise). It has not been previously submitted in support of a degree, qualification or other course.”

Signed:

Date: 24/05/11

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1. Introduction

This research aims to elicit subjective views from sixth form students on;

- Perceptions of the definition of healthy eating and factors which may be a barrier to making healthy food choices.
- Acceptable universal interventions to support all students to manage their weight (for example food on offer or opportunities for physical activity).
- What kind of treatment and support should be on offer for students who are overweight or obese.

The research questions to be addressed are;

- What factors do sixth form students perceive to be barriers to healthy eating and maintaining a healthy weight?
- What measures would sixth form students want in place to support them to make healthy lifestyle choices. For example food choices at college, opportunities for physical activity etc.
- What kind of services (this refers to specific services to treat overweight and obesity i.e. those that would be likely to warrant a referral and input of professionals trained in weight management) would sixth form students want available to help them manage their weight?

The prevalence of obesity in the UK has more than doubled in the past 25 years (Government Office for Science, 2007, Foresight Tackling Obesities: Future Choices. Retrieved from <http://www.foresight.gov.uk/OurWork/ActiveProjects/Obesity/Obesity.asp>). In general adolescents in the UK are not meeting healthy eating standards and are therefore not likely to achieve current or future optimum health. It is well recognised that adolescence is a critical stage in development of habits and health in later years (Coleman & Brooks, 2009 & Giskes, Patterson, Turrell & Newman, 2005) and that young people's views should be sought and taken into account when developing health interventions to increase the efficacy of such programmes (Coleman, Hendry, & Kleop, (Ed.), 2007; Donaldson, 2008, On the State of Public Health: CMO report, Annual report of the Chief Medical Officer, 2007 retrieved from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/AnnualReports/DH_0861 & Booth, Wilkenfield, Pagnini, Booth & King, 2008). Significant research has been undertaken to elicit the views of school aged children (Giskes et al., 2005; Klein, Lytle & Chen, 2008; Brown, Birch, Teufel & Kancherla, 2006; Taylor, Evers & McKena, 2005; Giskes, et al., 2005 & House, Su & Levy-Milne, 2006). Few studies however have focussed on the 16-19 age group attending further education. In 2004 the public health white paper, 'choosing health, making healthier choices easier' (retrieved from: <http://dh.gov.uk/publicationsandstatistics>) recognised the potential of developing further and higher education as a healthy setting. The basis of the healthy college's programme that was developed was that in order to provide a well targeted service that effectively

meets the needs of students, it is essential to consult about the type of services they would like to receive (Escolme, James & Aylward, 2006).

This study plans to elicit the views of sixth form students on barriers to healthy eating and the prevention of overweight and obesity. It will also explore the kind of interventions that should be in place to support them to make healthier choices and also consider the type of services that should be available for those who are overweight or obese. This will provide data on what barriers may limit adherence to lifestyle factors and what factors may promote change in this age group. This will help to inform future service design and methods of health promotion for 16 -19 year olds in further education settings.

2. Literature review

2.1 Obesity

The prevalence of obesity in the UK has more than doubled in the past 25 years and without clear action is predicted to rise to almost nine in ten adults and two thirds of children by 2050 (Government Office for Science, 2007. Foresight Tackling Obesity: Future Choices. Retrieved from <http://www.foresight.gov.uk/OurWork/ActiveProjects/Obesity/Obesity.asp>). This rapid rise in obesity presents a major public health challenge. Almost two thirds of adults and a third of children are overweight or obese (Department of Health, 2008. Healthy Weight, Healthy Lives: A cross government strategy for England. Retrieved from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_082378). The World Health Organisation defines obesity as ‘abnormal or excessive fat accumulation which can impair health.’ (The World Health Organisation. Retrieved from <http://www.who.int/topics/obesity/en>). Body Mass Index (BMI) is the measure used to determine obesity and is an index of weight for height. An adult is classified as obese if they have a BMI of 30 or above (National Institute for Health and Clinical Excellence (NICE), 2006, Clinical Guideline 43, retrieved from <http://guidance.nice.org.uk/CG43/Guidance>). At its simplest level the cause of overweight and obesity is an imbalance between energy consumed and energy expended (Department of Health, 2008, Healthy Weight, Healthy Lives: A cross government strategy for England. Retrieved from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_082378).

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Guidance/DH_082378). This imbalance however, is thought to result from a complex system of factors (Government Office for Science, 2007, Foresight Tackling Obesity: Future Choices. Retrieved from <http://www.foresight.gov.uk/OurWork/ActiveProjects/Obesity/Obesity.asp>).

The prevention and management of overweight and obesity is a complex issue and requires a comprehensive portfolio of interventions at a variety of levels in the system, i.e. individual, organisational and societal (Government Office for Science, 2007. Foresight Tackling Obesity: Future Choices. Retrieved from <http://www.foresight.gov.uk/OurWork/ActiveProjects/Obesity/Obesity.asp>). NICE Guidance on the prevention and treatment of obesity recommend that when dealing with individuals, barriers to lifestyle change should be explored and advice should be tailored for different groups. (NICE, 2006, Clinical Guideline 43, retrieved from <http://guidance.nice.org.uk/CG43/Guidance>).

A review of evidence on the prevention and treatment of childhood and adolescent obesity (Reilly, 2006) surmises that despite the evidence of the consequences of paediatric obesity in the short and long term, it is not perceived to be clinically important by many health professionals, patients or their parents. This presents a large gap in terms of perceptions of obesity versus the scale of the problem. The evidence base for prevention and treatment strategies although growing, is limited and whilst there are existing treatment and prevention strategies, further research is required to determine the long term success of these programmes.

2.2 Adolescence

In most developed countries young people aged between 10 and 20 years accounts for 13-15% of the population and are the subset which has experienced little or least improvement in overall health status over the past 40 years (Viner & Booy, 2005). The adolescent stage can begin as early as 9 or 10 for some and can continue for many until after their 21st birthday and is variably defined in both demographic and social terms (Coleman & Hendry, 1999). Skills level, maturity, education and parental supervision vary greatly across this span of years (Donaldson, 2008, On the State of Public Health: CMO report, Annual report of the Chief Medical Officer, 2007. Retrieved from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/AnnualReports/DH_086176). The term 'young people' is also increasingly being used to refer to this age group. The World Health Organisation classifies adolescence as 10 to 19 years and young people as 10-24 years (Viner & Booy, 2005). Adolescents are a distinct group, characterised by developing cognitive capabilities and judgement. They are spending increasing amounts of time with their peers and up to 5 hours a day using various media forms (Coleman et al., (Ed) 2007). With this unique group in a changing society there is a critical need for adolescent health research to enhance adolescent health and well being.

Young people's knowledge on how to maintain their own health has been found to be adequate; however this is not always apparent from their behaviour (Coleman et al., (Ed) 2007). Perhaps one of the most relevant considerations in terms of adolescent and

future adult health is the concept of invincibility. It is thought that for adolescents, health is very much about the here and now (Coleman et al., (Ed) 2007). Whilst understanding health information and the consequences of unhealthy behaviours adolescents appear to choose not to adopt healthy lifestyles. It would appear that young people don't think about the long term consequences of their actions as they feel they can change their behaviour at a later date.

Obesity is now the most significant chronic illness in adolescents (Viner & Booy, 2005). In the recent CMO report, Sir Liam Donaldson stresses that obesity increases the risk of developing; type 2 diabetes, cardiovascular disease, respiratory disease, liver disease and some cancers. There is also evidence to suggest that overweight and obesity can have a significant impact on psychological well-being, with many adolescents developing a negative self image and low self esteem (Donaldson, 2008, On the State of Public Health: CMO report, Annual report of the Chief Medical Officer, 2007 retrieved from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/AnnualReports/DH_086176). Therefore there is a clear rationale for interventions to be put in place to prevent and manage obesity in young people. Not only this, but the importance of development of habits in adolescence and their impact on health in later years is well documented (Coleman & Brooks, 2009; Stevenson, Doherty, Barnett, Muldoon,& Trew, 2007; Giskes et al., 2005; Viner & Booy, 2005 and The British Medical Association, Board of Science and Education, 2003, Adolescent Health retrieved from http://www.bma.org.uk/health_promotion_ethics/child_health/AdolescentHealth.jsp).

Adolescence is thought to be a critical time for the health and well being of an individual (Coleman & Brooks, 2009). Up to 79% of obese adolescents remain obese in adulthood (Donaldson, 2008, On the State of Public Health: CMO report, Annual report of the Chief Medical Officer, 2007 retrieved from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/AnnualReports/DH_086176). Young people as a focus of public health policy to tackle the obesity epidemic is therefore a key area.

This study focuses on a defined age range within the adolescent phase. Due to the limited literature specific to the 16-19 age group, the literature review includes studies which include, but are not restricted to, the 16-19 age group and has been widened to include literature relevant to younger age groups (predominantly younger adolescents).

2.3 Recommendations for healthy eating

UK healthy eating guidelines make eight practical recommendations in relation to achieving a balanced diet; base meals on starchy foods, eat lots of fruit and vegetable, eat more fish, cut down on saturated fat and sugar, try to eat less salt, get active and try to be a healthy weight, drink plenty of water and don't skip breakfast (8 Top tips for eating well. Retrieved from the Eat Well website: <http://www.eatwell.gov.uk>). Growth and development are rapid during teenage years and the demand for energy and nutrients is relatively high (The British Nutrition Foundation (2004) Nutrition through life: Teenagers, Retrieved from: <http://www.britishnutritionfoundation.or.uk>). The most recent Diet and Nutrition Survey (Bates, Lennox & Swan, 2010, NDNS Headline results

from Year 1 of the Rolling Programme retrieved from:

<http://www.food.gov.uk/multimedia/pdfs/publication/ndns0809appendixk.pdf>) showed that only 7% of 11-18 year olds girls and 22% of boys are meeting the recommended intake of at least five portions of fruit and vegetables a day. Only 19% of 16-24 year olds consume the recommended five portions of fruit and vegetables a day, compared with 27-34% of people in older age groups (The Department of Health, 2010. Our Health and Wellbeing Today, retrieved from: <http://www.dh.gov.uk>). Consumption of Non milk extrinsic sugars and saturated fats exceed Dietary Reference Values and fibre intake is lower than the Dietary Reference Values. Calorie restricted diets, which are popular among adolescent girls, have the potential to result in reduced intakes of key minerals such as calcium, zinc, iron and folic acid (Wood & Harper, 2008). In general, adolescents in the UK are not meeting healthy eating standards and are therefore not likely to achieve current or future optimum health. This highlights the importance of interventions to improve nutritional intake in adolescents.

2.4 Perceptions of healthy eating

Adolescents commonly categorise foods in terms of those they like and dislike rather than those which are healthy and unhealthy (Giskes et al, 2007 & Shepherd, Harden, Rees, Brunton, Garcia, Oliver et al. 2006). Following questioning on what they consider to be a healthy diet, there is a consistency across the literature in terms of classifications of 'healthy' and 'unhealthy' foods. Fruit and vegetables are commonly referenced as healthy foods whilst 'fast foods' and deep fried items are considered to be unhealthy

(Cross, Neumark-Sztainer, & Story, 2001; Dixey, Sahota, Atwal, & Turner, 2001 & House et al., 2006). It appears that adolescents, once prompted, can go on to list the main components of a balanced diet and include a wider range of food groups that just fruit and vegetables (House et al., 2006 & Cason & Wenrich, 2002) indicating that adolescents have a broad sense of what constitutes a healthy diet. Healthy eating is often associated with families and the home whilst unhealthy foods are associated with peers and eating outside of the home (Cross et al, 2001; Shepherd at al, 2006; O Dea, 2003 as cited in Jenkins & Horner, 2005). Healthy eating is rarely viewed as positive in its own right (Stevenson et al, 2007) but deemed as necessary to prevent obesity, or something enforced by parents (Booth et al., 2008).

2.5 Perceptions of weight

There is wide acceptance amongst adolescents that obesity is an important and significant issue (Booth et al, 2008; Brown et al., 2006 & Kilpatrick, Ohannessian & Bartholomew, 1999). A large study conducted in America across a diverse range of schools reported that most young adolescents (aged 9-13) recognise the links between lack of exercise and poor diet and obesity (Brown at al, 2008). This is supported in the UK literature. A study conducted by Dixey et al. (2001) with over 300 9-11 year olds aimed to explore young adolescents understanding of healthy eating and their understanding of the relationship between fatness, thinness and health. Children were found to link concepts of weight with healthy eating. Their perceptions of weight tended to relate to the short term consequences rather than longer term health concerns,

for example the issue of bullying of overweight children was a key concern. Pressure from the media to be a certain size was discussed by the children and even though they had an awareness of the concept of media manipulation, the stereotypes seem to have an impact on the participant's perceptions in relation to weight.

In terms of older adolescents, the reporting on perceptions of weight is less well evidenced. A small study on Brisbane college students using sound focus group methodology found that gaining weight would be a prompt to change eating and physical activity behaviour (Cason & Wenrich, 2002). A cross sectional study conducted in Australia with 12-17 year olds (Booth et al., 2008) found that adolescents thought that it is challenging to maintain a healthy weight due to availability of unhealthy food and lack of opportunity for physical activity. Most groups were found to be more concerned with being thin than a healthy weight, which again supports the importance placed on appearance.

The literature indicates that there is a trend towards overweight in adolescents who are trying to lose weight, particularly by unhealthful methods (Klein et al., 2008). This highlights the need for high quality information on weight management specific to this age group. Girls reference weight in relation to appearance and make the link back to healthy eating, whereas boys tend to make the link with sports rather than appearance (Cross et al., 2001). There has also been some research undertaken in the USA specifically with adolescent girls by Shepherd, Neumark-Sztainer, Beyer and Story (2006) to inform whether the focus of education setting based nutrition messages should

focus on weight control or general health. 50% thought it should emphasise health, 25% wanted weight specific information and 25% thought it should cover both. Although the findings of this study are limited in terms of generalisability, it highlights one of the biggest difficulties in developing a successful intervention. The needs of adolescents may differ based on their weight status so whilst an emphasis on healthy messages is required, there will be individuals who require more specific information in relation to weight management.

2.6 Barriers to healthy eating

Little is known about student's perceptions of the problem or suggestions for improving eating habits (Cousineau, Goldstein & Franko, 2004). It is recognised that whilst adolescents demonstrate an understanding of what constitutes healthy eating, this knowledge does not translate into changing behaviour to make healthier choices. Young people's perceptions of the barriers to healthy eating must therefore be examined to inform the design of appropriate interventions. There is a commonality in the literature in terms of key barriers to healthy eating which feature in the target age group of 16-19 year olds, but also in younger age groups. A systematic review by Jenkins and Horner (2005) states that key influences on adolescent health can act as both barriers and facilitators and that they operate on 3 levels; individual, community and societal. The review identified that time, availability and food preferences are key barriers to healthy eating. This is supported by a number of other studies (House et al., 2009; Cason & Wenrich, 2002; Taylor et al., 2005; Cross et al., 2001 & Shepherd et al., 2006). Other

specific areas which are explored in depth in the majority of studies are the influence of parents, peers and education settings.

Parental influence is referenced as both a barrier to and facilitator of healthy eating. Parental and child nutrient intake correlates positively for most nutrients, thus implying that parental diet can have a significant influence on the nutrient intake of adolescents (Taylor et al., 2005). Adolescents who participate in family meals are more likely to have a better nutrient intake; however current work patterns for parents have led to a decrease in family dinner time. This can mean that there is decreased supervision of adolescents eating habits (Storey, Newmark-Sztainer & French, 2002 as cited in Jenkins & Horner, 2005). This is supported by Giskes et al. (2005) who found that parents were perceived as a barrier to healthy eating as they had no time to prepare healthy foods. A study by Stevenson et al. (2005) presents an interesting angle that during adolescence parents facilitate the skills necessary for life outside the parental home; however this seems to be rare in terms of food. This has potential implications in relation to supporting the development of healthy behaviours over the long term. Parents have also been reported to use energy dense foods as treats or luxuries and adolescents report having little involvement in the selection or preparation of foods in the home. It would appear that parents are responsible for foods available in the house. If parents do not like certain healthy foods then they are unlikely to be available at home (Giskes et al., 2005). The literature indicates that parents have a stronger influence on eating habits in younger adolescence. A study aiming to find the views of 11-16 year olds found that parents and the home environment were associated with healthy eating and parents were

referenced as being involved in educating young people about healthy eating (Shepherd et al., 2006). A further study with the same age focus found parents to be more influential than friends in relation to the development of healthy eating behaviours (Dixey et al., 2001).

During adolescence peers take on an increased significance for young people as advice and support givers (Coleman et al., (Ed.), 2007). Cason and Wenrich (2002) found that in older adolescents, if friends are not concerned with a healthy lifestyle then this is perceived to be a barrier to healthy behaviours. Giskes et al. (2005) found peers and friends were frequently mentioned as barrier in relation to pressures to conform. Booth et al. (2008) also found that participants in their study clearly recognised the influence of peers in relation to encouragement to take up healthier behaviours. This is a key consideration in terms of designing interventions to improve adolescent health.

Adolescents spend most of their time away from home, either in education or in the community with friends. The environment can have a significant impact on the eating habits of adolescents. College poses new challenges for students in terms of dietary habits with an increase in meals eaten outside of the home, determined by the canteen and more freedom in terms of what foods are purchased in the wider environment. A common theme in the findings of the literature is that adolescents perceive healthier food to be more expensive and the choice within education settings to be limited in terms of healthy options (Giskes et al., 2005; Booth et al., 2008; Jenkins & Horner, 2005 & Andajani-Sutjahjo, Warren, Inglise & Crawford, 2004). A study was conducted by

Cason and Wenrich (2002) which used questionnaires and then a small number of focus groups to elicit attitudes and beliefs of undergraduate college students in the USA. Students reported that foods served tended to be high in fat and the vegetables were unappealing. A study using focus groups with dietetic and non dietetic students discussed poor availability of healthy meals and healthy foods being expensive (House et al., 2006). This represents a large area for policy change to support an improvement in the diet of adolescents and a reduction in obesity trends. Whilst it is clear in the literature that adolescents feel colleges have a role to play in offering healthy and affordable foods, there is little in the literature about adolescent's views on the role of college in relation to education about healthy eating and the development of cookery skills.

2.7 Interventions

It is not clear what kind of nutrition resources or interventions college students would find helpful and there is a surprising lack of information specific to this transitional age group. Successful strategies to encourage healthy eating behaviour depend upon understanding the influences on adolescent's lifestyle choices (Giskes et al., 2005).

Evaluation is limited in relation to weight management schemes such as a whole school approach to health (British Medical Association, Board of Science and Education, 2003, Adolescent Health retrieved from

http://www.bma.org.uk/health_promotion_ethics/child_health/AdolescentHealth.jsp).

Whilst in recent years there have been annual evidence updates in relation to childhood

obesity, these focus on population interventions and do not include the 16-19 age group (Summerbell, 2010, Annual evidence update- obesity- childhood obesity: surveillance and prevention. NHS Evidence- National Library for Public Health. Retrieved from: <http://www.library.nhs.uk/publichealth>).

Guidelines from the National Institute of Health and Clinical Excellence (NICE, 2006, Clinical Guideline 43, retrieved from <http://guidance.nice.org.uk/CG43/Guidance> on the prevention and treatment of obesity) make recommendations based on the best available evidence and propose a more enhanced role for schools recognising the need for a whole systems approach to obesity. Whilst no specific reference is made to colleges, we could assume that the recommendations for schools would be the most appropriate to apply to the sixth form college setting. Specifically that;

Head teachers and chairs of governors, in collaboration with parents and pupils, should assess the whole school environment and ensure that the ethos of all school policies helps children and young people to maintain a healthy weight, eat a healthy diet and be physically active, in line with existing standards and guidance. This includes policies relating to building layout and recreational spaces, catering (including vending machines) and the food and drink children bring into school, the taught curriculum (including PE), school travel plans and provision for cycling, and policies relating to the National Healthy Schools Programme and extended schools. (NICE, 2006, Clinical Guideline 43, retrieved from <http://guidance.nice.org.uk/CG43/Guidance>, p.48).

A recent systematic review by Poobalan, Aucott, Precious, Crombie & Smith (2010) on weight loss interventions in 18-25 year olds identified key points in the life course when individuals are vulnerable to weight gain. Adolescents will experience one or more of these critical points; puberty, teenagers leaving home to join college/university, couples in the early stages of cohabitation and pregnancy. This highlights the importance of the sixth form college setting in presenting a key opportunity to facilitate the development of habits to support the achievement and maintenance of a healthy weight both in the short and long term.

Colleges have been working to address health issues for a number of years. In 2004 the Public Health white paper, 'Choosing Health, Making Healthy Choices Easier', retrieved from: <http://dh.gov.uk/publicationsandstatistics>) recognised the potential of developing Further and Higher Education as a healthy setting. "Key features of a Healthy College should include; the institutional procedures, values and policies; the environment; the curriculum, and the staff/student relationship including pastoral support for students." (O'Donnell and Gray, 1993 as cited in Drury &Doherty, 2005).

Colleges are ideal places for health interventions due to the use of whole systems approaches across the whole setting (Drury & Doherty, 2005). Interestingly recent years have seen much emphasis and policy direction placed on the role schools can play in preventing obesity, yet resource, policy direction and literature to support the translation of this work into the sixth form setting is limited. Whilst literature specific to the detail

of what interventions for healthy weight in this setting should look like is limited, general principles in relation to designing health interventions for this age group can be gleaned;

- It is critical to understand the concerns of adolescents and incorporate their ideas and perceptions into interventions (Booth et al., 2008).
- Messages appear to be reaching adolescents but assistance is needed to translate this knowledge into healthy behaviours (Drury & Doherty, 2005).
- New approaches are needed to make health programmes and services more adolescent centred (Donaldson, 2008, On the State of Public Health: CMO report, Annual report of the Chief Medical Officer, 2007 retrieved from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/AnnualReports/DH_086176).

The Healthy Colleges study and report states that; “in order to provide a well targeted service that effectively meets the needs of both staff and learners within further education colleges, it is essential for colleges to consult learners and staff about their needs and the types of services they would like to receive.”(Escolme et al., 2002. p 11).

In order to achieve an intervention that addresses the needs of adolescents and supports the translation of knowledge into behaviour change it is key to elicit the views of 16-19 year olds on barriers to healthy eating, and what interventions they feel should be in place.

There have been several high quality studies undertaken relating to barriers to healthy eating in a range of age groups in the UK and other developed countries. Giskes et al. (2005) conducted a small study using sound methodology which examined the health and nutrition beliefs of Brisbane adolescents aged 13-15. Hesketh, Waters, Green, Salmon and Williams (2005) aimed to elicit child and parent views of barriers to healthy eating in 7-11 year olds in Australia with a diverse sample of 119 children and 17 parents. Dixey et al. (2001) conducted a large qualitative study in Leeds with over 300 participants as part of a larger study to gain insight into children's understanding of healthy eating and explore barriers in 9-11 year olds. Stevenson et al. (2007) conducted 12 single sex focus groups with 12-15 year olds in UK. All of these studies used qualitative methodologies in the form of semi structured focus groups. To date there has been little or no literature published relating specifically to the views of sixth form students in the UK on healthy eating and obesity. By using focus groups in sixth form settings it is anticipated that we will gain a rich understanding of sixth form student's experiences and perspectives relating to healthy eating and obesity within the context of their own circumstance and setting.

2.8 Summary relevant published work

From the literature it would seem that there is considerable evidence indicating that common barriers to healthy eating in adolescence include preference of foods, availability and cost of healthier choices, and parental and peer influences. Whilst adolescents appear to have a good understanding of what constitutes a healthy diet and

how to prevent overweight and obesity, this knowledge does not appear to translate into behaviour. It is implicit in the literature that adolescents should be consulted with and their views taken into account, in the development of interventions to prevent obesity and encourage healthy eating. However, there is limited published evidence to indicate that this is happening in practice. This study will aim to elicit subjective views from sixth form students on;

- perceptions of the definition of healthy eating and factors which may be a barrier to making healthy food choices.
- acceptable universal interventions to support all students to manage their weight.
- what kind of treatment and support should be on offer for students who are overweight or obese what kind of treatment and support should be on offer for students who are overweight or obese.

3. Methods

3.1 Design

Public health is concerned with changing behaviour and in order to identify opportunities for change there is a need to understand why people behave how they do (Green and Thorogood, 2004). This is supported by Harris, Gleason, Sheean, Boushey, Beto and Fada et al. (2009) in that to completely understand nutrition and food related phenomena, qualitative research methodology is essential in understanding why people make the food choices that they do.

This study used qualitative research in the form of semi structured focus groups in order to explore adolescent's perceptions about healthy eating and their views on future service design. Focus groups are commonly used in studies examining people's perceptions of health which is in keeping with one of the main study aims (Green and Thorogood, 2004). The use of focus groups over one to one interviews was chosen to provide access to information on how adolescents interacted with each other in relation to healthy eating and weight management as described by Morgan (1999). It also provided the opportunity of the group process to help people to explore and clarify their views as described by Kitzinger (1995) in Freeman (2006). There is also a view that focus groups provide an insight into how people interact and how views are formed in day to day life (Pollock, 1995 & Lunt & Livingstone, 1996 as cited in Flick, 2006).

A topic guide was produced around the subject being investigated using suggestions from Foddy (1993) and examples reported in Giskes (2005). This was used to guide the basic discussion. The focus groups aimed to elicit sixth form student's views on healthy eating and obesity. The key objectives were; to gain an understanding of the barriers to healthy eating, to determine what population level interventions should be in place to support adolescent's to manage their weight and what more specific treatment options adolescents feel are appropriate for their age group. Their perceptions about the responsibility of parents and college in encouraging healthy eating were also explored.

3.2 Population and subjects

Colleges in Central Lancashire were approached via the Healthy Further Education Network. A discussion was held with college staff setting out the aims and objectives of the research, the expectations of the college if they took part and opportunity for questions to be asked. Following this a formal letter was sent to the colleges (appendix 1) and two colleges agreed to take part in the research. They were given an information sheet (appendix 2), participant information sheets for students (appendix 4) and consent forms (example can be viewed at appendix 3), which were signed and returned. A further college expressed an interest in taking part at a later stage and subsequently a presentation was given to the college and they signed consent to participate.

In this study purposive sampling was used. 16-19 year olds attending the participating colleges with a known interest in the healthy college agenda were approached. The

colleges identified existing groups of pupils in the form of student councils who had a role within the college setting to represent the views of the student body. These groups were approached to take part in the research on the basis that they would be information rich. College staff therefore advertised the opportunity to specific groups of pupils who then volunteered to take part in the focus groups. No exclusion criteria were applied. Although there are important gender differences reported in adolescent health behaviours and attitudes, these tend to be reported in terms of physical activity and body image, rather than attitudes to healthy eating (British Medical Association, Board of Science and Education, 2003, Adolescent Health retrieved from http://www.bma.org.uk/health_promotion_ethics/child_health/AdolescentHealth.jsp).

Dates and times to run the focus groups were agreed with the colleges at least two weeks in advance. This time allowed interested students to read the participant information and if they wished, volunteer to take part in the groups.

It was difficult to specify in advance the number of participants for the focus groups as this was dependent on the numbers who volunteered and attended the sessions. An upper limit of 12 was put in place. Freeman (2006) states that between 6 and 12 participants is typical. Patton (as cited in Flick, 2006) and Morgan (1998) recommend that 6-8 participants is most suitable. Focus groups consisted of between 3 and 9 participants.

3.3 Procedures/Ethical issues

A briefing prior to the recording starting ensured participants were: informed about the purpose of the study, reminded that the sessions were being recorded and reassured about their anonymity. Participants were informed that they were able to withdraw from the study at any time. Consent forms were then completed (example can be viewed as appendix 5).

It was not anticipated that any participants would experience undue stress or concern as a result of participating in the focus groups. Confidentiality was ensured by keeping recordings in a locked drawer, anonymising transcripts and then destroying tape recordings once they had been transcribed. Study participants were identified by a number to ensure they remained anonymous. Participants were reminded that they were discussing topics with peers that they will be in contact with following the session (as recommended by Morgan, 1999) and ground rules about confidentiality were discussed.

Although disclosure of sensitive information was unlikely with the topic area. A member of college staff was present throughout the discussions. This was arranged at the request of the colleges participating, in order to adhere to their child protection protocols and guidelines on work with outside agencies. Information about local services was available at the request of participants following the session, should they

have wished for further information or support regarding weight management, no participants requested further information. When more sensitive questions were asked, such as those related to obesity treatment services, they were phrased to elicit what participants thought the views of young people their age were, rather than individual views. No information deemed as sensitive or requiring follow up from the college was discussed in any of the sessions.

Ethical approval was granted by the University of Chester, Faculty Research Ethics Committee. A letter of support for the research was provided by NHS Central Lancashire (appendix 6).

3.4 Data collection

The primary method of data collection was through audio recordings of the focus groups and field notes taken during the sessions. Focus groups took place in a private room within the college setting. Focus groups were recorded on an analogue tape recorder and digital recorder and additional notes were taken by the facilitator. No pilot study was conducted using the proposed questions; however they were developed based on those used in similar studies from Foddy (1993) and examples reported in Giskes (2005) and adapted to be appropriate to the age group. The questions provided a framework, but were not necessarily asked in that order and participants were given chance to introduce their own topics for discussion and in the main part were responsible for the development of the conversation as recommended by Stevenson et al. (2007). To

establish rapport the discussion was started with more general questions about understanding of healthy eating then moved onto more specific questions about their preceptions. Questions were not necessarily asked in the order of the topic guide, but were asked in line with participants discussion to aid flow of the conversation. Focus group discussions lasted approximately 45 minutes. All focus groups were facilitated by AD. Following completion of the focus group, when the tape recorder was switched off, participants were offered the opportunity to ask the researcher any further questions. Tapes were transcribed by AD, in the majority of cases on the same day as the sessions took place and in all cases prior to the next focus group. This allowed alterations to be made to the topic guide based on findings from the initial focus groups. For example, participants in the first two focus groups both raised ethical issues related to food choice; this was subsequently included in the topic guide prior to the next session. The topic guide can be viewed below. As agreed, a feedback summary of the findings was provided to all colleges in order to support them with their Healthy Further Education programme of work.

Table 1: Focus group topic guide

Focus group Topic Guide
<ul style="list-style-type: none">• Definition of health and factors influencing this• Importance of health• Definition of healthy eating• Benefits of a healthy diet• Barriers to eating a healthy diet• Consequences of not eating a healthy diet• Influences on food choice• Level of responsibility college has for helping you to make healthier choices• Life outside college – what could be done to make it healthier?• Level of responsibility parents have in developing healthy attitudes, environment and behaviours• Level of influence Peers have• What types of services should be on offer to support this age group to maintain a healthy weight? <p><i>Further topics added following discussions in the first focus group;</i></p> <ul style="list-style-type: none">• Cookery skills• Reading food labels• The impact of alcohol on diet and weight• The role of physical activity

- Growing foods
- Ethical issues

3.5 Analysis

All tapes were transcribed verbatim by AD using Office Excel. Computer assisted qualitative data analysis software was investigated for the purposes of analysing the data, As I have not undertaken in depth training in these, the benefits of using the would have been lost and no more useful than using a thematic approach via excel. Thematic content analysis was the chosen approach in order to categorise recurrent themes, as described by Green and Thorogood (2004). This methodology is also thought to be preferential for generating policy and practice orientated findings, which was a key aim of the study (Green & Thorogood, 2004). It is common for a combination of approaches to be used in analysing qualitative data (Ritchie & Lewis, 2003). Elements of theory building approach were also used as described by Fade (2004). Responses were categorised in each transcript, the responses were brought together to classify recurrent themes which were initially derived based on the research questions and added to during the process of analysis as required. Sub headings were identified where appropriate.

4. Results

4 focus groups were conducted in 3 college settings, with a total of 25 participants. 18 females and 7 males aged between 16 and 19. 11 participants were studying A levels, 3 were studying BTEC's and 11 were studying vocational courses. The majority of the participants were White British. The table below provides a summary of the group make ups.

Table 2: Summary of focus group composition

Location	No of participants	Gender of Participants	Age range	Course Type
Skelmersdale	8	8 Females	16-19	Vocational
Preston	9	7 Females, 3 males	16-18	6 A levels, 3 BTEC
Leyland	5	2 Females, 3 Males	17-18	A Levels
Leyland	3	1 Female, 2 Males	18-19	Vocational

Having followed the methodology described to analyse the data collected during the 4 focus groups the following key themes emerged;

- Perceptions of healthy eating
- Barriers to healthy eating
- Facilitators of healthy eating

- Influences on eating
- Sources of information
- Interventions that this age group would like to see in place
- Treatment options for those who are overweight or obese in this age group.

These themes were predominantly identified by the initial research question, with others added in as appropriate during analysis. Influences on eating were added, as many factors affecting food intake were discussed but not referenced to be either a barrier or a facilitator. Interventions relates to population level action to promote healthy eating whereas treatment options relates more specifically to targeted services for those who are overweight or obese.

4.1 Perceptions of healthy eating.

5 sub categories were identified in relation to perceptions of healthy eating as detailed in the table below;

Table 3: Perceptions of healthy eating

Theme	Sub category
Perceptions of healthy eating	Definition of healthy eating
	Benefits of a healthy diet
	Achievement of a healthy diet
	Causes of overweight
	Consequences of not having a healthy diet

Definition of healthy eating – all groups showed a basic understanding of the components of a healthy diet. There was less understanding about the causes of overweight; however this was only discussed by one group. Fruit and vegetable intake was referenced first in all cases when defining a healthy diet. With probing, participants were able to go on to describe the other key elements of a healthy diet. The role of alcohol was explored and was discussed in the context of its role providing certain nutrients within the diet and also its effect on food consumption.

Group 1 # 5 “red wine is good for you isn’t it, a glass a day”

Benefits/consequences related to diet - There was a split between the groups as to how they described the impact of diet on health. The majority of participants described this relationship in terms of the perceived benefits of having a healthy diet. However one of the groups discussed this in relation to the consequences of not having a healthy diet. A strong theme across all groups was that a healthy diet is important for health in later life. In the short term, benefits of healthy eating were described in relation to factors such as concentration, mood, skin and participation in activities.

Group 2 # 2 “Like things can build up over a long time, like heart disease and saturated fat and liver damage, so if you’re healthy now it helps later on.”

Achievement of a healthy diet –The general consensus from the groups was that on the whole, although young people are aware of what a healthy diet consists of and the

consequences of not eating a healthy diet, this does not translate into actually eating healthily.

Causes of overweight – overweight and obesity were referenced as consequences of a poor diet, however were not discussed in detail by all groups. One group had a significant discussion in relation to the causes of overweight and obesity. All participants in this group believed that there were strong genetic influences determining the likelihood of becoming overweight and that if you were affected by these, it is inevitability.

Group 4 # 3 “I know that in my family a lot of us are pre-disposed to being bigger when we're older, my nana was, my dad is, my nanas mum was. I used to be quite fat myself, but I used to be short, so as I grew taller I thinned out a bit, I probably will get bigger just because everyone else in my family did.”

4.2 Barriers to healthy eating

10 sub categories were identified under this theme. In 3 of these further sub categories were identified as per the table below;

Table 4: Barriers to healthy eating

Theme	Category	Sub Category 1	
Barriers to healthy eating	Motivation		
	Taste		
	Cost		
	Environment	Weather	
		Availability in locality	
	Health	Stress	
		Allergies	
		Eating Disorders	
	College	Availability of healthy options	
		Eating environment	
		Taught sessions	
	School		
	Cooking skills		
	Time		
Family			

In most cases, cost was listed first as a barrier to healthy eating, this related to both within and outside of college.

Group 1 # 2 “yeah, price is the biggest issue, you can get a bowl of chips for a pound but a salad is like two pound.”

The environment was discussed in relation to time of year and temperature and the effect this can have on intake and also more strongly in relation to what is available, again both within and outside of college.

The effect of other health concerns such as allergies and stress were mentioned, however only by a small number of participants with little follow up discussion.

Participants described in detail the barriers that they attributed to healthy eating in relation to the college setting. These mirrored the two other barriers that were discussed in detail; cost and environment. There was a strong feeling in all groups that the cost and availability of ‘unhealthy’ items at college was favoured over ‘healthy’ items, for example with unhealthier foods being cheap and quicker to access.

Group 3 # 5 “it’s the speed it takes them to serve the pasta and things take a lot longer to prepare than chips or whatever, so the queues are massive if like 5 people want pasta, it could take so long. “

Group 3 # 4 “in college, its a lot cheaper to buy say a bowl of chips and chicken nuggets or something from the fast food place than to buy a sandwich. “

The group were prompted to consider what information college provided about healthy eating during lessons, this was met with few responses, indicating that it is perhaps not a factor that students consider important in relation to food choices.

Lack of cooking skills was discussed. Participants were asked to rate their cooking skills and whilst they could discuss their individual competency. This line of questioning did not lead to any richer information in relation to whether the participants consider this to be a factor influencing their eating habits. Groups tended to be split fairly evenly between those who perceived themselves as able to cook and those that couldn't. Cooking was related to time as a barrier to healthy eating;

Group 2 # 5 “it's when you want to cook something healthy and it's going to take like an hour I don't think I can wait that long.”

Taste of healthy foods, family and motivation and schools were referenced as barriers by a small number of participants, but these were not strong sub themes in the discussions.

The themes which came out as the strongest barriers were college and also factors which participants related strongly to discussions about college such as cost and the environment. This implies that participants perceived that college presents significant

barriers to healthy eating, but consideration should be given to the fact that the focus groups were conducted in the college setting.

4.3 Facilitators of healthy eating

Many of the factors which participants believed to facilitate healthy eating were also referenced as barriers. This relationship is discussed further at the end of this section.

6 sub themes were identified under this theme, 2 of these required further sub categories to be identified. 4 of these sub themes are the same as the sub themes identified as barriers to healthy eating; environment, college, schools and cooking skills indicating that factors affecting food choice can have both positive and negative influences.

Table 5: Facilitators of healthy eating

Theme	Sub Theme	Sub category 1
Facilitators of healthy eating	Environment	
	Media	
	College	Food available
		Eating environment
	Parents	Role models
		Food purchase and preparation
	Schools	
	Cooking skills	

Discussions about the environment mirrored those identifying climate as a barrier, however in this case climate was referenced as facilitating healthy eating;

Group 2 #2 “You do eat healthier in the summer I find, like when you're on holiday and you eat sandwiches and stuff. “

The positive influence of the media was touched on by one group in relation to maintaining a healthy weight. The media will be discussed further in section 4.

Again, similar to barriers identified, college was the most discussed sub theme in relation to facilitating healthy eating. Type of food provided was discussed the most by participants;

Group 2 # 3 “Yeah I said can I have no salad and they said no it comes with salad, so in that sense they promote healthy eating.”

Group 3 # 5 “they do provide free fruit with like a fast food meal.”

Whilst the eating environment was mentioned it was referenced less as a facilitator than as a barrier.

Parents were discussed the most in terms of being role models for developing healthy eating patterns. Some reference was made to their role in purchasing food for the household.

Changes to healthy eating policy in schools were mentioned in the majority of groups and participants were supportive of this legislation and recognised its role in promoting healthy eating.

Approximately half of the participants stated that they were able to cook, however they did not necessarily strongly relate this to the food choices they make.

4.4 Relationship between perceived barriers and facilitators

It is interesting to examine the relationship between facilitators and barriers. It would appear that all of the factors which can be a barrier to healthy eating can also facilitate healthy eating if addressed in an appropriate way for the target group. The college setting triggered the most detailed discussions about influences on healthy eating, indicating that the participants felt that it could have a significant impact on their choices. In the majority of cases college was referenced as a barrier to healthy eating in the first instance, and only after further discussion (prompted by the participants not the researcher) was college recognised for its impact on facilitating healthy eating.

Group 3 # 4 “in college, it’s a lot cheaper to buy say a bowl of chips and chicken nuggets or something from the fast food place than to buy a sandwich.”

Group 3 # 5 “they do provide free fruit with like a fast food meal”

There was a strong sense throughout the discussions about college that participants felt the role was to provide options, so not necessarily force the issue of healthy eating;

Group 4 #1 “it’s all there for you in the canteen to make the choice you wanna make, whether it’s healthy or unhealthy like, the choices are there.”

It was also apparent that where healthy provision was made, this did not necessarily translate into students taking the healthy option;

Group 3 #5 “they do provide free fruit with like a fast food meal.”

Group 3 # 5 “you go have an option and not many people do take that option though, it’s in like a bowl”

Group 3 # 4 “no you have to go and get it and it’s a pain to be honest, to go over there and get the fruit, it’s a lot easier to walk off an not have it.”

4.5 Influences on eating

This was the largest theme, as many factors influencing food choices and eating habits were discussed during the sessions and the majority were not necessarily identified as a barrier or a facilitator, but were deemed to be important by the participants. There is an overlap between the sub themes of this theme and those of the previous themes specifically; parents, environment, college, the media and health. 8 Sub themes were identified and for 5 of these further sub categories were identified as per the table below;

Table 6: Influences on eating

Theme	Sub theme	Sub category 1
Influences on eating	Parents	Food purchase
		Food preparation
		Role models
	Media	
	Environment	Seasonal events
		Locality
	Ethics	Food production
		Religion
	Health	Body image
		Long term considerations
		Smoking
		Alcohol
	College	Level of responsibility
		Taught sessions
	Social background	
	Peers	

The social environment appeared to be a big influence on participants particularly in relation to peers, parents and institutions. Parents appear to be the main food purchasers in the household, however participants in all groups mentioned the influence they have

on what their parents buy, by requesting specific items or discussing ethical considerations;

Group 2 # 3 “I shout at my mum when she buys cod, cod supplies are running out, no joke they are.”

In most cases the mothers are responsible for purchasing food for the family and in cases where fathers are referenced; this is in relation to buying ‘unhealthy’ foods. Participants indicated that they thought parents were responsible for teaching children healthy eating habits and cookery skills.

Group 4 # 1 “I think parents have all the responsibility for the children.”

The language used when discussing parental responsibility indicated that participants were making statements in relation to those in a younger age group than themselves. Yet other statements indicate that parents still have a great deal of control;

Group 4 # 1 “I’ll just eat what’s put on the table that night like we all eat the same thing but like my mum will say we’re having this tonight we’re having that, oh alright then, I won’t really get a choice in it.”

The influence of the media was discussed at some point in all of the sessions. Many of the statements related to body image and how to tell if the media are telling the truth.

Whilst the media is recognised by participants as an influence, the discussions give little indication as to whether the media is predominantly a barrier to or a facilitator of healthy eating.

When groups discussed the environment, they talked in terms of potential influences, rather than those that were pertinent to themselves and their peers. Across all groups it was acknowledged that students can go out of college at a lunchtime and participants listed the types of food outlets available, however they did not go on to explore links between this and impact on food choice. The main driver in relation to eating at college or off site appeared to be time factors, along with what friends were doing.

Group 4 # 1 “it depends whether people can be bothered walking down because it is like a 15 minute walk down to sub way.”

Ethical considerations and their influence on food choice were not highlighted in any of the previous research, so this element was of particular interest.

Group 2 # 2 “I don’t care about the price, I buy all the organic stuff but my sister will just eat anything that’s rubbish.”

This was the topic during which participants in the first 2 groups became most animated and engaged in discussions about food, whereas those in the latter 2 groups commented on this aspect, but without the same level of conviction. Those who did not appear as

passionate about this aspect gave a reasoned argument about the possible negative influences on healthy eating in relation to organic foods costing more.

Group 3 # 5 “yeah but it makes healthy food more expensive even more which then again could put more people off, it’s difficult getting the balance right with that kind of thing.”

The main ethical concerns related to the quality of foods, such as level of meat content and how animals had been raised. The groups also touched on sustainability and organic foods. Linking this to the information sources referenced by participants, this sub theme could be becoming more important in relation to food choices following increasing media coverage of such issues.

Other issues relating to health were discussed in all groups. These included specific lifestyle choices such as; drinking alcohol, smoking, ill health and body image. Alcohol was discussed independently from diet in most groups, until probed further, when links were made. Smoking as a method of weight control and risk of weight gain after smoking cessation were recognised.

Long term health risks do not appear to be a factor which would influence diet in the participants. Whilst there was recognition of the consequences, this seemed unlikely to impact on choices in the here and now;

Group 1 # 1 “it’s like I’d have to be on my death bed before I did anything about it.”

The main concerns reported about diet and lifestyle relate to how participants look and feel about themselves.

Group 4 # 1 “I think most people they're not bothered about their health, they're more bothered about what they look like, their figure.”

Group 1 # 5 “it’s the confidence side of it and the psychological side of it on how I look and how I feel.”

College appears again under this theme, as further discussions about the role of colleges took place, which were unable to be categorised as barriers or facilitators. Main discussions focussed on whether participants took part in any taught sessions on healthy eating. This seemed to vary dependent of which taught subjects participants had chosen. Those that were science based seemed to cover a good degree of nutrition information, but it was felt that this was not the case for those choosing other subjects. The general feel from discussion was that college has a role to provide healthy options, but not necessarily to encourage behaviour change any further than this.

Group 3 # 4 “well the college does have responsibility, they are still responsible for us, but we have a lot more free choice and we've got free will, we choose

whether we have healthy food or burgers or whatever or soup, so as long as college have got their side out there, they're fairly balanced in price and how they advertise them to us.”

One group discussed the influence of social background and the likelihood of people from higher class background picking more academic subjects, therefore having a greater knowledge about nutrition. This was not discussed by the other groups.

The influence of peers was only discussed very briefly and not in all groups. This was unexpected as previous literature identifies peers as having a significant influence on eating habits in young people.

4.6 Sources of information

Internet was the source of information most commonly mentioned by the participants.

There was a good level of discussion in relation to food labelling, however this followed a question specific to food labelling which needs to be considered. TV and college were also referenced, but not in a significant level of detail.

Table 7: Sources of information

Theme	Sub Theme
Sources of information	Food labels
	Internet
	TV
	College

The majority of participants were aware about food labels and reported checking these regularly. This seemed more common in females than males. A number of participants did not understand the information on food labels and even those who reported using this information regularly reported that certain elements were confusing. This mainly related to the portion size information.

Group 4 # 1 “yeah, but I think a lot of people forget to read like the little bit of writing underneath depending on how many grams it is, they'll eat it and think that's not too many but then till be like half a packet or something.”

Amount of salt and fat were most commonly checked, along with calories.

When unprompted, the internet was most commonly referenced as a preferred source of information on healthy eating. Most participants could name reputable sites; however several participants showed an awareness of the risks of the wealth of information available;

Group 3 # 2 “there's people that go on sites as they just want to lose weight fast so go on anorexia sites for a quick solution and it just goes wrong.”

Participants did not spontaneously mention college as a source of information until discussing what they felt should be in place for people their age.

4.7 Interventions

Participants were asked what things they think should be in place to support people of their age to make healthy food choices. 6 Sub themes were identified. The college setting was discussed the most and as such responses were split into 3 sub categories.

Table 8: Interventions

Theme	Sub Theme	Sub category 1
Interventions	College	Where to access support
		Food provision
		Taught sessions
	Parents	
	Media	
	Government	
	Schools	
	Physical activity	

Parents were referenced as a source for support by one participant. The media was discussed with a specific focus on social media and its role in delivering information to this age group;

Group 4 #1 “I think that’s the best route to get through to us because that’s what most people our age spend time on.”

One group had a detailed discussion about the role of the government in promoting healthier lifestyles. Whilst this demonstrated a level of current political knowledge in relation to key drivers in the healthy eating agenda, the group did not agree on the level of responsibility that government should take and this topic was not discussed in the other groups.

Group 3 # 3 “I think they should raise tax on like MacDonal'd's and stuff and lower it on fruit and veg.”

In relation to what colleges could put into place to support young people, the view points were fairly consistent within and across the 4 groups. Most participants did not know where to go within college if they wanted information on diet and weight management, whilst they would not want treatment services within college, they did see a role within for example, student services for offering information on healthy eating. In terms of food provision key recurrent recommendations included; increasing the amount of healthy options and pricing these favourably, providing information on the nutritional content of the foods provided and freely available drinking water.

Group 1 # 4 “like they should have leaflets in the canteen of what they're serving and how many calories are in that meal.”

Group 4 # 2 “to be honest it would help with people thinking about what they're eating, but if like they had to know how much protein and stuff had gone in it would help.”

The general discussions indicated that students felt that colleges were taking steps already to encourage healthy eating.

When discussing whether any information was provided on healthy eating during taught sessions, responses were limited and this required further elicitation. Generally participants felt that this wasn't included in their enrichment activities, but felt that it could be and also responded positively in relation to discussions about practical cookery sessions.

The role of schools was raised by participants during each session. There appeared to be a consistent opinion that schools have a greater role to play than colleges in promoting healthier food choices. This was 2 fold and seemed to focus around the increased level of freedom for college students, but also the thought that by the time you reach college it is too late to develop healthy eating habits.

Group 3 # 3 “I think it's too late for us but if you started teaching people in primary school....”

The topic of physical activity was introduced by the researcher because of its role in weight management. Participants did not discuss physical activity in much detail. The strongest opinions were that time was a big barrier to students being physically active and that college work was a pressure and a priority.

Group 3 # 5 “I would be thinking I could be using this time to do college work and if that affects my grades or whatever at college I feel bad about the fact that I've been doing exercise as its affected my grades.”

Most exercise was reported to take place incidentally i.e. active travel to and from college. Where it was planned it was referenced as a fun activity for social gain, rather than with any consideration of health benefits.

Group 3 # 3 “...I think for some people it's (physical activity) more of a social thing as well.”

There was a divide in reported behaviours of 'sporty' and 'non-sporty' groups and recognition that if you don't play formal sports or are not motivated to be physically active, then by the time you reach college you can be inactive in comparison to being at high school.

When prompted to discuss what college provided in terms of opportunities for physical activity, the majority of participants felt that college provided a range of enrichment

activities along with competitive sports, however there appeared to be an issue with promotion of these activities and motivation of students to participate.

4.8 Treatment

Towards the end of the focus groups, more specific questions were asked in relation to treatment services for people in this age group who may be overweight or obese. The majority of participants appeared to be of normal weight, so in order to respond to this question, participants were required to think about what they thought should be available and what people who were overweight or obese would prefer. These findings should therefore be interpreted with caution.

The groups did all have similar opinions in relation to treatment services. They felt that people would prefer to access these outside of college rather than a programme in the college setting; this appeared to relate to confidentiality and also the perceived expertise of those delivering the programme.

Group 3 #1 “I would prefer to go outside of college if I was in that situation.”

Group 3 # 5 “someone from outside of college as it seems like they're more qualified to give you help and more focussed on providing that service.”

In terms of who should deliver these programmes, the consensus of opinion was that they should be delivered by a young person, or someone with experience of delivering to this age group and someone with personal experience appeared favourable.

Also discussed, but in a lesser amount was the importance of supporting young people's emotional health and well being and approaching the topic of weight sensitively.

4.9 Summary

In summary, it would appear that whilst sixth form students can define a healthy diet, they do not appear to endeavour to meet these guidelines. There was recognition of the long term health consequences of a poor diet, but this did not have a strong influence on food choice in the here and now.

Cost appeared to be the biggest barrier to healthy eating and this related to both within and external to, the college environment. The role of parents and college seem to have the greatest influence on facilitating healthy eating. The majority of factors discussed as barriers were also discussed in their role as facilitators. Many influences on food choice were discussed, however although it was identified that they impacted on dietary behaviours, it was not clear whether they were predominantly barriers or facilitators.

Participants were unsure on where to access information and support within the college setting, but had good knowledge of other sources of information e.g. websites. Physical activity does not appear to be something students would participate in for health gain

and there were significant barriers to participation related to time and academic commitments. There were clear and consistent views about what support they would like in college; water, more information on foods served in the canteen and inputs in tutorials. In relation to treatment services, participants felt that these should be located outside of college and be young person friendly.

5. Discussion

5.1 Introduction

The present study examined young people's views on healthy eating with specific focus on definition of healthy eating, barriers and facilitators of healthy eating and preference of healthy eating interventions. The findings of this research were largely similar to that of other studies into young people's views on healthy eating. Barriers identified reflect the findings of similar literature i.e. cost and availability, however influences on eating habits were found to differ to the findings of other studies in that parents were reported to have a greater influence than peers. In terms of service provision there was agreement amongst all participants that services should be tailored towards young people and delivered by people with experience of working with this age group, which is in line with the policy context on health services for young people.

5.2 Perceptions of healthy eating

Participants were able to discuss the basic definition of a healthy diet. Foods were discussed in terms of 'healthy' and 'unhealthy' with foods such as fruit and vegetables listed as healthy and deep fried foods as unhealthy, which is consistent with the findings of Cross et al., (2001); Dixey et al., (2001) and House et al., (2006). Following an initial response of fruit and vegetables, when prompted participants could list the main components of a healthy diet, this is supported by the findings of House et al. (2006) and Cason and Wenrich (2002).

The contribution of alcohol to diet was discussed, which does not appear to have been explored in existing literature. Participants recognised the impact of alcohol on food intake and could reference perceived health benefits of alcohol, for example cardiovascular benefits of red wine consumption. The contribution of calories in the diet from alcohol did not seem to be well understood. Interestingly although there was an awareness of the links between alcohol and diet, it was discussed in the context of being a completely separate risk taking behaviour to poor diet. Research conducted in Australia into the clustering of health related behaviours in 18 year olds found that smoking, drinking alcohol and adverse dietary choices clustered in both men and women, indicating a linkage between risk taking behaviours. Alcohol, along with physical inactivity and poor diet, features in the top 6 risk taking behaviours in adolescents (Donaldson, 2008, On the State of Public Health: CMO report, Annual report of the Chief Medical Officer, 2007 retrieved from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/AnnualReports/DH_086176). This would indicate that whilst poor diet and alcohol intake are viewed as separate entities by young people, this may not actually be the case in relation to the health choices they make.

There was an interesting split in how participants referred to the importance of diet in relation to health. The majority of participants discussed this in terms of the perceived benefits of having a healthy diet, indicating that they viewed having a healthy diet as a positive health giving thing, however several of the participants framed their responses

in terms of the consequences of not having a healthy diet, putting a more negative slant on healthy eating behaviours and indicating that they were viewed as a necessity. This is consistent with the findings of Stevenson et al. (2007), who found that healthy eating was rarely viewed as positive in its own right, but as a necessity to avoid obesity. Taylor et al., (2005) also found that a number of participants discussed healthy eating with a negative connotation which is supported by the findings in this research.

Benefits of healthy eating were discussed in terms of short term gains such as appearance, mental health and participation in activities. These findings are very similar to those of a study by van Exel, de Graaf and Brouwer (2006) which, although conducted with a younger age group (12-15 years) found common themes such as; how young people felt about themselves, no concerns about future health and the importance of living in the here and now with a focus on current fitness and appearance. This supports the evidence suggesting that this age group are concerned with health in the short term and the concept of invincibility (Coleman et al, 2007 & Cason & Wenrich, 2002).

Although weight was recognised as a consequence of a poor diet, it was not discussed in great detail by any of the participants. Other studies would indicate that there is a wide acceptance amongst adolescents that obesity is an important and significant issue. (Booth et al, 2008; Brown et al., 2006 & Kilpatrick et al., 1999). All three of these studies found that adolescents felt that prevalence of overweight and obesity was too high and that the majority of participants had concerns about their weight. Participants

did discuss the impact of overweight with a focus on short term issues such as ability to participate in activities and psychosocial consequences, which was also found in the study by Booth et al. (2008). It is therefore surprising that this did not seem a topic of great importance or interest to the participants. This could be due to the fact that the majority of participants appeared to be a healthy weight.

What is of most concern from the discussions which did take place in relation to weight was the perception that due to genetics, weight gain in some people was inevitable. This is contradictory to findings by Stevenson et al. (2007) where weight control was found to be one of the main drivers of eating habits. However it is supported by findings by Booth et al. (2008) who found that young people felt there was an inevitability of weight gain, due to factors outside of their perceived sphere of control. This links to findings discussed within the next section, such as the level of emphasis placed on the responsibility of parents and the college setting.

5.3 Barriers, facilitators and influences

In terms of the discussion and future implications of this research it would seem appropriate to consider the factors identified under each of the above headings collectively as many of the factors discussed were reported to act as both barriers and facilitators. This is consistent with findings from a systematic review by Jenkins and Horner (2005) which found that key influences on adolescent health can act as both barriers and facilitators. Other factors were also discussed in terms of impact on food

choice, but it was not clear from the discussions whether the participants perceived these influences to be barriers or facilitators. To group these as barriers or facilitators would therefore be reliant on how the impact was interpreted by the researcher.

Cost came out as the strongest barrier to healthy eating, this was felt to be relevant both within and external to the college environment. This is similar to the findings of other studies which have identified that healthier food is perceived to be more expensive (Giskes et al., 2005; Booth et al., 2008; Jenkins & Horner, 2005; Andajani-Sutjahjo et al., 2004 & Cason & Wenrich, 2002). Interestingly cost and availability of healthy foods at college was discussed in depth by all groups, with the initial reaction being that healthier foods were less available and more costly. As discussions progressed, participants reported steps taken by colleges to make healthy options available and were able to list healthy options and favourable costing of fruit and vegetables, for example. This does not appear to be the case in the existing literature and may be a reflection of steps taken in Further Education settings in recent years due to the policy context in the UK as in 2004 the Public Health white paper, ('Choosing Health, Making Healthy Choices Easier', the Department of Health retrieved from:

<http://dh.gov.uk/publicationsandstatistics>), which recognised the potential of developing Further and Higher Education as a healthy setting. It could however also indicate that the college setting is perhaps perceived by young people to be a bigger barrier to healthy eating than it actually is and therefore not the true reason why students are not making healthier choices. Food provision at college was also discussed as a facilitator in terms of healthy options provided, for example free fruit and salad with meals. It appeared that

when given time to reflect and discuss food provision in more detail, participants recognised the role college played in supporting them to make healthy choices. An interesting aspect around this was the realisation that although college provided these options, they were not often taken up, indicating that although food provision at college was perceived as a facilitator, this does not actually appear to influence eating habits in practice.

The existing literature indicates that parents have a stronger influence over diet in younger adolescence (Shepherd et al., 2006 & Dixey et al., 2001); however the findings of this study identified parents as one of the greatest facilitators of healthy eating in their capacity as role models and the responsibility they take for food purchase. There was a strong sense of the responsibility of parents in teaching children healthy eating habits and cookery skills. This was almost discussed in the third person, so not in relation to the role parents have with the participants themselves, but what they perceive is important for children in early life. It could be inferred that participants felt that if they had not established healthy eating habits now, then it was too late for them. Existing literature also highlights the importance of the influence of peers in this age group. (Coleman et al., (Ed.), 2007; Cason & Wenrich, 2002; Giskes et al., 2005 & Booth et al., 2008). Surprisingly, the influence of peers was not discussed in detail during any of the sessions, which could indicate that peers have little influence on the eating habits of the participants. It is perhaps more likely that participants do not recognise the influence that peers are having on their eating habits, or is possible that they did not wish to discuss this in detail in front of their peers.

The college setting was central to the majority of discussion in the sessions. Participants felt that although college has a role in promoting healthy choices, that this should not be enforced. The importance of choice of options was key. This is consistent with the developmental stage of adolescence for example the development of judgement, autonomy and independence (Donaldson, 2008, On the State of Public Health: CMO report, Annual report of the Chief Medical Officer, 2007 retrieved from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/AnnualReports/DH_086176; Coleman & Hendry, 1999 & Stevenson et al., 2007). It was apparent from the responses that participants felt that they receive little information on healthy eating from college and would not know where to go in the college setting for information on diet and weight management. Food availability in the surrounding area was touched on, however fairly high level responses were received to this i.e. statements of fact about what was accessible, there appeared to be little concern or understanding about how this may influence their food choices. This is consistent with findings from Giskes et al. (2005) where factors external to adolescent health such as the environment and shops were not mentioned as contributing to health.

Participants were probed to consider cookery skills. The level of cookery skill was mixed with roughly half of the participants considering they were able to cook. The presence or absence of cookery skills was again discussed in a fairly detached manor i.e. participants recognised the importance but the impact did not individually seem very

pertinent to them. This is perhaps understandable in the group who consider themselves able to cook, however for those who can't it did not appear to be a matter of concern.

Factors affecting young people in the short term were discussed in detail in relation to their role in food choices. Aspects such as preventing weight gain, body image and how you feel appeared far more important to young people than any long term benefits or consequences. It could be observed that there was little emphasis placed on the participants themselves making healthy choices; the responsibility was placed on parents, the college setting and wider societal factors such as the media. This could be interpreted as a detachment from ownership of healthy eating behaviours but also provides insight into the lack of personal value placed on healthy eating which would support the findings of Stevenson et al. (2007) and Taylor et al. (2005).

The influence of ethical considerations was raised by participants and prompted animated and engaging discussion. This is of particular interest as it is not a common theme within existing literature. Participants in two of the groups talked passionately about how ethical considerations influence their food choices. In the other two groups, there was an understanding of this as an influence, but it did not seem as important to these participants.

5.4 Sources of information

It has been suggested that young people in the UK aged 6-17 spend as much as 5 hours a day consuming/using media forms with some evidence pointing to even higher levels (Batchelor & Raymond in Burtney & Duffy, (2004) as cited in Coleman et al., (Ed.), 2007). Participants in the study reported using the internet as their main source of information on diet and health. This is supported by findings from a recent study looking at where obese adolescents turn for help which recognised the convenience of the internet as a source of support (Lewis, Thomas, Blood, Castle, Hyde & Komesafoff, 2010). Participants in the focus groups demonstrated an awareness of which sites provide good quality information and an understanding that there is a lot of factually incorrect information available online about this subject area. Although participants did report using the internet as a source of information, they felt that there was a lack of information specifically aimed at their age group. This was also found by Cousineau et al. (2004) in their research into developing a web based nutrition resource for college students they searched 375 sites resulting from key word search for nutrition for college students and found that none of them specifically targeted college students.

Understandably television was also a source of information, this was also found by Giskes et al., (2005) where television was discussed as both a barrier to and facilitator of healthy eating. However in the study participants, television was discussed specifically in relation to ethical considerations around food. The emergence of this topic area is

likely to be related to the increasing number of programmes about food which have been aired in recent years.

Participants were able to discuss food labelling in detail and appeared to use labels regularly to inform their food choice. This was not mentioned in any existing literature, however again could be reflective of the increasing emphasis on food labelling as a priority of national food policy. This contrasts with findings in younger adolescents which found that they did not tend to check labels and weigh up the nutritional content of foods that they chose for themselves (British Medical Association, Board of Science and Education, 2003, Adolescent Health retrieved from http://www.bma.org.uk/health_promotion_ethics/child_health/AdolescentHealth.jsp). Again this could be a topic for further investigation.

5.5 Interventions

Whilst literature specific to the detail of what interventions for healthy weight in this setting should look like is limited, general principles in relation to designing health interventions for this age group have been identified during the literature search;

- It is critical to understand the concerns of adolescents and incorporate their ideas and perceptions into interventions (Booth et al., 2008).

- Messages appear to be reaching adolescents but assistance is needed to translate this knowledge into healthy behaviours (Drury & Doherty, 2005).
- New approaches are needed to make health programmes and services more adolescent centred (Donaldson, 2008, On the State of Public Health: CMO report, Annual report of the Chief Medical Officer, 2007 retrieved from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/AnnualReports/DH_086176).

The views of participants in relation to what interventions should be in place for their age group were fairly consistent. The provision of information on the nutritional content of foods available at college was requested by participants. This would allow students to use similar information to make food choices within the college setting as they appear to be using outside of college. Participants felt strongly that free drinking water should be provided and should be easily accessible; this is consistent with standards in place for food and drink provision in schools (School Food Trust, Food Based Standards, 2005 retrieved from <http://www.schoolfoodtrust.org.uk/the-standards/the-food-based-standards>).

Participants felt that there was opportunity for information on healthy eating to be provided in tutorials and for practical cookery sessions to be offered. Cason and Wenrich (2002) also found that students had a preference for practical sessions. In contrast to the suggestions made around food and drink provision, when these suggestions were discussed there was a sense of these suggestions being given because

participants felt they should be, rather than a true enthusiasm about these opportunities being on offer. It is unclear from existing literature what provision should be made in sixth form settings and whilst policies are in place to support schools to become healthy environments, there is not the same mandate for colleges. It is therefore perhaps unsurprising that students themselves appear indifferent to interventions in the college setting.

Physical activity seems to be something that you do if you are 'sporty' i.e. play competitive sports for the college. This is supported by findings by Lake, Townshend, Alvanides, Stamps and Adamson (2009) who found that young people studying sport reported being more physically active than those who didn't. Issues with motivation in those who don't play competitive sports are significant as is the influence of time pressures attributed to amount of college work, and the feeling of a need to prioritise this. Physical activity provision was also compared to the school setting where it was compulsory and this change when you arrive at college. It is not considered within the frame of reference of health benefits but very much more in terms of social benefits and fun. This is in line with findings from O'Dea (2003) who found that the major perceived benefits of physical activity were social and the major barriers were time constraints and motivation.

5.6 Treatment

Specific questions were asked related to treatment options for this age group. As the majority of participants were a normal weight, these questions were answered in terms of what participants felt overweight or obese people their age would want to access, therefore the usefulness of the responses is limited in terms of informing future service development.

The views of participants were however consistent. They felt that people would prefer to access a service based outside of college. Interestingly, along with considerations about confidentiality there was a perception that someone external to the college setting would have greater expertise in this subject area. The importance of someone of a similar age or who understood young people and had experience of working with this group was highlighted. This is consistent with Department of Health Guidance on making health services young people friendly (Department of Health, 2007, You're Welcome Quality Criteria: Making Health Service Young People Friendly, retrieved from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_073586).

Most groups picked up on the importance of managing the emotional well being aspects of weight concerns and this seemed to be of more importance to participants than advice or support with diet and physical activity.

Whilst it is not possible to transfer the results of this study to similar population groups or use the findings as the sole information source to inform new interventions, there are some general findings which could be taken into consideration;

- The fact that knowledge on healthy eating does not translate into healthy eating behaviour, so merely educating young people about healthy eating is not enough.
- This group appear indifferent in relation to healthy eating and long term risks of a poor diet, it is important to focus interventions on what the participants' value i.e. what are the short term gains?
- Finding a factor around food which interests the audience may be an opportunity to facilitate change – the most animated the participants were about food choice was in relation to ethical issues, which is not something healthy eating education would usually focus on, therefore are we being innovative enough in how we approach health education?
- Services should be young person friendly and tailored to meet the specific needs of this age group, determined via consultation with young people.

5.7 Future research

This study provides some supporting evidence for findings within the existing literature which relates to a range of ages within adolescence. It indicates that sixth form students

understand the components of a healthy diet and the benefits and consequences of dietary choices; however it is clear that this knowledge does not influence their behaviour. Future research is required to look at how this gap can be addressed. Of particular interest would be investigation into perceived and actual barriers. Many common perceived barriers have been identified, but when explored in real depth, it would appear that even when interventions are in place to address these perceived barriers, this does not necessarily lead to behaviour change implying that there are barriers at a deeper level, which are perhaps not consciously known to the individual, or elicited during the focus group discussions.

In terms of practical primary prevention interventions that could be put into place in the college setting, the findings of this study are in line with policy direction and provision in school settings, therefore colleges could look at water provision and nutritional information on foods served. Further research is required within the sub population of sixth form students who are overweight or obese to identify appropriate treatment methods for this group.

Of particular interest was the passion demonstrated around ethical issues and impact on food choice. This raises the question that when looking at dietary behaviour change, although our key outcome may be in relation to nutritional intake, this is not necessarily the in road to encouraging change. Within the field we perhaps need to approach food education in its broadest sense, to increase the chance of finding what the key

motivators of food choice are for the relevant population group and working with those as a basis to achieve dietary change.

5.8 Limitations

This appears to be the only study conducted specifically with this age group in the UK. Whilst the number of participants was average for conducting focus groups, participants were purposefully selected to give their views on this topic area. The results can therefore not be generalised to the wider sixth form student population.

As described by Potter in Hardy and Bryman (2009) it was intended that participants would be asked to validate the findings, however due to time constraints and logistics within the colleges this was not possible. Validity could have therefore been improved by gaining respondent validation following the focus groups. The generalisability of the results could have been helped by using triangulation methods (Bryman, 1988). Two forms of triangulation as described by Denzin (1978) could have been implemented. The focus groups were conducted, transcribed and analysed by one researcher, investigator triangulation could have been used by having two or more researchers involved in the process to discuss results and reach a conclusion. Involvement of an independent researcher in the analysis stage or involvement of a scribe during sessions would have been beneficial in reducing potential bias and discussing emerging themes. Data triangulation could also have been used, for example questionnaires could have been

distributed to the wider college population. The findings from this could then have been combined with those from the focus groups in order to gain a better understanding of the phenomenon and or to confirm the qualitative findings. It would have been useful to collect data on BMI of participants and to include participants from a range of BMI categories so that a more representative view of what type of treatment services should be on option could have been gleaned.

Participants were made aware of my role as a researcher and also my employment in relation to weight management within the NHS locally. This may have influenced the answers given by participants. A member of college staff was present during the sessions to comply with college safeguarding policies, however this may have influenced the responses participants gave in relation to the college setting. These limitations should be considered in the context of this study.

6. Conclusions

In this participant group there is a good understanding of the definition of healthy eating. Healthy eating was often perceived to be a necessity rather than something which participants valued and enjoyed. This indicates that the understanding of the components of a healthy diet do not necessarily equate to young people making healthy eating choices. The groups perceived cost and food availability to be the biggest barriers to healthy eating. Despite this perception participants could list healthy foods available at favourable costs within the college setting perhaps meaning that the reported barriers are not the actual barriers to young people making healthy choices. Parents were discussed by all groups as still having a strong influence on food intake. This related predominantly to their influence on food purchase and preparation. Participants felt that parents have a greater responsibility to be role models for and provide healthy eating opportunities for younger children. This was discussed in the context of being a window of opportunity for shaping habits in later life, and if this was not the case that the opportunity to change eating behaviour was lost.

The college setting was central to discussions in all groups in terms of what measures should be in place to support young people to make healthy choices. Participants recognised the importance of the role that college could have in supporting healthy eating skills and choices with particular reference to; the potential of being given information in tutor sessions, healthy food provision and cookery skills. Whilst participants recognised this as a possibility, they appeared indifferent as to whether any

of this was provided or not. The most important consideration for the participants was related to the responsibility of college to provide a choice but that this age group should ultimately have the freedom to make their own choices. This was in contrast to their view which supported measures within schools to only provide healthy choices. The main actions that all participants agreed on were that free drinking water should be accessible and that information on the nutrient content of foods served at college should be available.

The question relating to what treatment services should be available for young people who are overweight or obese was more challenging to address as the majority of participants appeared to be of normal weight. Participants were therefore required to answer from the perspective of young people who may be overweight and obese. Views were consistent in that participants felt these services should be located outside of the college setting and delivered by people who had the skills and experience to deal with people their age. They also felt they should be age specific so they could be tailored to the needs of young people.

This research along with the existing research can be used to inform public health practice and to a lesser extent the provision of weight management treatment services, specifically;

- Young people in general are aware of the components of a healthy diet.
Knowledge does not appear to be enough to facilitate behaviour change.

- Whilst common barriers are identified such as cost and availability, where there are interventions are put in place to address these, behaviour change is not always evident, indicating that consideration needs to be given to barriers which may exist at a deeper level i.e. the perceived barrier is not necessarily an actual barrier.
- Whilst colleges are taking steps to become healthier settings, there is more that could be done, namely; provision of free drinking water, nutritional information on food available at college, better use of tutor time for healthy eating information and practical cookery skills.
- Any treatment services should be young person friendly, specific to this age group, delivered by individuals with experience of working with young people and offered outside the college setting.
- Most physical activity appears incidental so focus should be given to encouraging active travel and raising awareness of the health benefits.

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8. Appendices

8.1 Appendix 1: Letter to colleges

Contact: Amy Dunne

Email:

Tel:

**Central Lancashire Primary
Care Trust**

Jubilee House
Lancashire Business Park
Centurion Way
Leyland
PR26 6TR

Tel: 01772 644400

Fax: 01772 227022

info@centrallancashire.nhs.uk

www.centrallancashire.nhs.uk

06/09/2009

Dear Sir/Madam

Re: Healthy eating and weight management focus groups

I work for NHS Central Lancashire with a remit around weight management care pathways, which involves looking at what services are available to support people to manage their weight and how people access and move between these services. I am also an MSc student with the University of Chester under the supervision of Dr Basma Ellahi. In order to complete my MSc I am required to complete a research project. The aim of the project is to investigate sixth form student's views of barriers to healthy eating and weight management.

As you will be aware, colleges provide the ideal setting to obtain the views of young people and in light of the focus on health from the Every Child Matters Framework and initiatives such as Healthy Further Education, they also directly influence health.

I would like to conduct a focus group in your college with 5-8 students, which should take no longer than an hour and a half. Some sensitive topics may be raised by the students, however it is anticipated that this will be minimal. Adequate procedures are in place to deal with this, and I am experienced in discussing healthy eating and weight management with young people. Students will be provided with an information sheet

and asked to consent to take part in the discussion. There will be a 10 minute briefing prior to the session and de-briefing following the session.

The sessions will be tape recorded and the discussions will then be transcribed. At this stage all names and other identifiable information will be removed and following transcription the tapes will be destroyed. The anonymised information will then be analysed as part of my MSc. It is also hoped that by understanding what young peoples views are on barriers to healthy lifestyle choices, we will be able to design and target interventions for weight management in this age group more effectively.

If you would like students from your college to take part in the research, please sign and return the attached consent form. For your information, I have included draft copies of the participant information sheets and consent forms along with an information sheet of what as a college you would need to do.

Thank you for taking the time to read this. Should you have any further questions, please do not hesitate to contact me.

Yours sincerely

Amy Dunne

Obesity Care Pathway Co-ordinator

8.2 Appendix 2: College information sheet



PARTICIPANT INFORMATION SHEET - Colleges

Sixth form student's perspectives on barriers to healthy eating and weight management

Students within your college are being invited to take part in a research study. Before you decide if you are happy for the college to be involved, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully, and discuss it with others if you wish. Ask the research team if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

What is the purpose of the study?

The research aims to investigate the views of sixth form students on;

- a) perceptions of healthy eating and barriers to making healthy food choices.
- b) what measures should be in place to encourage all students to make healthy lifestyle choices.
- c) What type of services should be available to help students to manage their weight?

The findings will be submitted as part of a MSc research project. A written report will be available to inform colleges what students think should be in place and the report will be used to inform any future weight management services designed for this age group in the central Lancashire area.

Why have we been chosen?

You have been chosen to take part because you are a sixth form college in the central Lancashire area.

Do I have to take part?

It is up to you to decide whether or not to take part. If you decide to take part you will be given this information sheet to keep and be asked to sign a consent form on behalf of the college. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect you in any way.

What will happen to me if I take part?

If you decide to take part, you will be given this information sheet to keep and asked to sign the consent form. This will give your consent for a researcher from the University

of Chester to arrange focus groups within the college. At this focus group, students will have the opportunity to raise and discuss their views on healthy eating and weight management. There will be about eight students taking part and the meeting, which will be led by a researcher, will last about an hour. With your permission (and that of the others in the group), the meeting will be audio taped. No-one will be identifiable in the final report.

What are the possible disadvantages and risks of taking part?

There are no disadvantages or risks foreseen in taking part in the study.

What are the possible benefits of taking part?

Your students may welcome the opportunity to share and discuss their views with other students. By taking part you will enable students to contribute to the development of future services on offer for their age group.

What if something goes wrong?

If you wish to complain or have any concerns about any aspect of the way you have been approached or treated during the course of this study, please contact: Professor Sarah Andrew, Dean of the Faculty of Applied and Health Sciences, University of Chester, Parkgate Road, Chester, CH1 4BJ. Tel: 01244 513055.

Will the information be kept confidential?

All information which is collected about your students during the course of the research will be kept strictly confidential so that only the researcher carrying out the research will have access to such information.

What will happen to the results of the research study?

The results will be written up and submitted as a dissertation as part of the researchers Masters qualification. A report will also be shared with the colleges who have taken part and the commissioners of healthy lifestyles services at NHS Central Lancashire. Individuals who participate will not be identified in any subsequent report or publication.

Who is organising and funding the research?

The research is not funded. The research is organised by the researcher under the supervision of the Faculty of Applied and Health Sciences at the University of Chester.

Who may I contact for further information?

If you would like more information about the research before you decide whether or not you would be willing to take part, please contact:

Amy Dunne [@chester.ac.uk](mailto:amy.dunne@chester.ac.uk)

Thank you for your interest in this research.

8.3 Appendix 3: College consent form



College Consent form

Title of project: Sixth form student’s perspectives on barriers to healthy eating and weight management

Name of researcher: Amy Dunne

Please tick the box if you agree with the statement:

1.	I confirm that I have read and understood the college information sheet for the above named study, and have had the opportunity to ask the lead researcher and questions.	<input type="checkbox"/>
2.	I understand that participation of the college is voluntary, and that we are free to withdraw from participating in the study at any time, without giving reason and without my rights being affected.	<input type="checkbox"/>
3.	I agree to the focus group being audio-recorded for the purposes of this research project.	<input type="checkbox"/>
4.	I agree for college to take part in the above study.	<input type="checkbox"/>

 Name of Staff member Date Signature

 Name of Person taking consent Date Signature
 (If different from the researcher)

 Name of the Researcher Date Signature

Two copies required. One for college and one for researcher.

8.4 Appendix 4: Participant information sheet



PARTICIPANT INFORMATION SHEET

Sixth form student's perspectives on barriers to healthy eating and weight management

You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully, and discuss it with others if you wish. Ask the research team if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Thank you for reading this.

What is the purpose of the study?

The research aims to investigate the views of sixth form students on;

- a) perceptions of healthy eating and barriers to making healthy food choices.
- b) what measures should be in place to encourage all students to make healthy lifestyle choices.
- c) What type of services should be available to help students to manage their weight?

The findings will be submitted as part of a MSc research project. A written report will be available to inform colleges what students think should be in place and the report will be used to inform any future weight management services designed for this age group in the central Lancashire area.

Why have I been chosen?

You have been chosen to take part because you are a sixth form student in the central Lancashire area.

Do I have to take part?

It is up to you to decide whether or not to take part. If you decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect you in any way.

What will happen to me if I take part?

If you decide to take part, you will be given this information sheet to keep and asked to sign the consent form. This will give your consent for a researcher from the University of Chester to contact you to invite you to attend a focus group meeting. At this meeting, you and other students will have the opportunity to raise and discuss your views on healthy eating and weight management. There will be about seven other students taking part and the meeting, which will be led by a researcher, will last about an hour. With your permission (and that of the others in the group), the meeting will be audio taped. No-one will be identifiable in the final report.

What are the possible disadvantages and risks of taking part?

There are no disadvantages or risks foreseen in taking part in the study.

What are the possible benefits of taking part?

As a student you may welcome the opportunity to share and discuss your views with other students. By taking part you will be contributing to the development of future services on offer to your age group.

What if something goes wrong?

If you wish to complain or have any concerns about any aspect of the way you have been approached or treated during the course of this study, please contact: Professor Sarah Andrew, Dean of the Faculty of Applied and Health Sciences, University of Chester, Parkgate Road, Chester, CH1 4BJ. Tel: 01244 513055.

Will my taking part in the study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential so that only the researcher carrying out the research will have access to such information.

What will happen to the results of the research study?

The results will be written up and submitted as a dissertation as part of the researchers Masters qualification. A report will also be shared with the colleges who have taken part and the commissioners of healthy lifestyles services at NHS Central Lancashire. Individuals who participate will not be identified in any subsequent report or publication.

Who is organising and funding the research?

The research is not funded. The research is organised by the researcher under the supervision of the Faculty of Applied and Health Sciences at the University of Chester.

Who may I contact for further information?

If you would like more information about the research before you decide whether or not you would be willing to take part, please contact:

Amy Dunne [@chester.ac.uk](mailto:amy.dunne@chester.ac.uk)

Thank you for your interest in this research.

8.5 Appendix 5: Participant Consent Form



Consent form

Title of project: Sixth form student's perspectives on barriers to healthy eating and weight management

Name of researcher: Amy Dunne

Please tick the box if you agree with the statement:

1.	I confirm that I have read and understood the participant information sheet for the above named study, and have had the opportunity to ask the lead researcher and questions.	<input type="checkbox"/>
2.	I understand that my participation is voluntary, and that I am free to withdraw from participating in the study at any time, without giving any reason and without my rights being affected.	<input type="checkbox"/>
3.	I agree to my focus group being audio-recorded for the purposes of this research project.	<input type="checkbox"/>
4.	I agree to take part in the above study.	<input type="checkbox"/>

 Name of Participant Date Signature

 Name of Person taking consent
 (if different from the researcher) Date Signature

 Name of the Researcher Date Signature

Two copies required. One for participant and one for researcher

8.6 Appendix 6: Letter of support NHS Central Lancashire



Central Lancashire Primary Care Trust
Jubilee House
Lancashire Business Park
Centurion Way
Leyland
PR26 6TR

Tel: 01695 588000

Info@centrallancashire.nhs.uk
www.centrallancashire.nhs.uk

Dear Ms Dunne,

Barriers to healthy eating and the prevention of overweight and obesity: a qualitative study of sixth form students perceptions.

REC Reference: Not applicable
SSA Reference: Not applicable

Thank you providing the information regarding the above study. The Research & Development department can confirm that the information is of a satisfactory standard and are therefore happy for this project to go ahead as Service Evaluation.

I would like to draw your attention to the Data Protection Act 2004 and your responsibilities with respect to this.

On completion of your project I would be grateful if you could provide the R&D Department with a report of any findings and actions, where applicable.

Please contact us if you require any further guidance or information on any matter mentioned above.

The R&D Department supports you in this endeavor and we wish you every success in your project.

Yours sincerely

A handwritten signature in black ink, appearing to read "SWaters".

Shirley Waters
Research & Development Manager