Addressing Obesity in Stevenage, Hertfordshire:
A Consultation with Young People

Laura Hamilton, Charlotte Hamlyn Williams, Wendy Wills, Elspeth Mathie

Centre for Research in Public Health and Community Care (CRIPACC)

University of Hertfordshire

Jen Beer, Hertfordshire County Council Public Health team

November 2019

Summary

Public Health England have identified that almost a quarter of children are overweight when they start primary school, which increases to a third when they leave in year 6 aged 10-11 years. This has implications for young peoples' physical and mental health and also later in adult life. The newly launched NIHR Applied Research Collaboration (ARC) East of England is focusing on selected areas of health inequality and this includes neighbourhoods in Stevenage, Hertfordshire which have high rates of childhood obesity.

In order to find out what young people think about these issues, Hertfordshire County Council and the University of Hertfordshire carried out a collaborative project in 2019. Hertfordshire County Council have adopted a Whole Systems approach to obesity and are keen to engage with young people in order to prioritise issues identified by them. The importance of 'involving' young people in shaping services has been widely documented. Two researchers met twice with 56 young people (from a range of schools) aged 16 years who were attending the National Citizen Service (NCS) scheme at a school in Stevenage in the summer holidays. A number of involvement activities were carried out during the sessions. The young people, with help from the researchers, facilitated their own informal discussion groups, using maps, flips charts, post-it notes and an anonymous suggestion box. The first session did not mention obesity but allowed open discussion about what it was like to live in Stevenage and the second session focussed more on the issue of 'obesity and weight'. The young people were encouraged to find their own solutions and imagine if they "were in charge".

The four main themes that came from the sessions were; affordability, crime and anti-social behaviour, transport and places to go and eat. A number of solutions were suggested by the young people which included; healthy environment (e.g. cycle paths, street lights, regulation of shops), community approach (e.g. more affordable sports activities), schools (e.g. raise awareness, promote sport), focus on young people (e.g. activities for young people and healthy affordable eating outlets) and helping people maintain a healthy weight. The priorities identified by local young people and the wider issues they raised are important to take into consideration when shaping any intervention or public health initiative, especially when considering the wider determinants of health. Listening to the issues and solutions and using the language of young people is vital and young people should be included in co-designing any services that are aimed at them. Involving local young people who know an area and who can identify important issues is vital for any successful public health intervention.

Acknowledgements

Introduction

Childhood and adolescent overweight and obesity

Obesity and excess weight are complex and multifaceted issues that can have significant implications for an individual's physical and mental health (Simmonds, Llewellyn, Owen, & Woolacott, 2016). Excess weight is driven by a range environmental, social and individual factors (Ralston et al., 2018). Findings from the National Child Measurement Programme (NCMP; Public Health England, 2019a) indicate that almost a quarter (22.6%) of children are overweight or obese when they begin primary school (aged 4 – 5 years). By the time they leave primary school in year 6 (aged 10 – 11 years) just over a third (34.3%) of children are overweight or obese. The proportion of children (aged 10 – 11 years) who are overweight or obese across Hertfordshire is significantly lower (28.6%) in comparison to the rest of England (Hertfordshire Public Health, 2018). In Stevenage, however, a district within Hertfordshire, the three-year average (2015/16 – 2017/18) is 33.4 per cent for children aged 10 – 11 years (Hertfordshire Public Health, 2019).

The most recent analysis from Health Survey for England (2018a, 2018b) shows that over a third (37%) of young people at secondary school (aged 11 – 15 years) are overweight or obese. In comparison, two decades ago the proportion was 30 per cent. Adolescence is a period defined by significant transition, including physically, emotionally and socially. During this period of transition, young people's health is particularly vulnerable to the effects of broad determinants, for example family income and neighbourhood factors (Hagell et al., 2018; Viner et al., 2012). Young people who live in relatively socio-economically deprived areas, such as Stevenage, are more likely to have excess weight and the gap between the most and least deprived has widened over time (Davies, 2019; Hagell & Shah, 2019). Obesity also tracks through the life course whereby a young person who is overweight or obese is more likely to be overweight or obese in adulthood (Simmonds et al., 2016). This has implications not only for physical health (Reilly & Kelly, 2011) but also for mental, social and emotional well-being. Young people with obesity are more likely to experience bullying, poorer mental health, lower self-esteem and stigmatisation (Gatineau & Dent, 2011). 'Weight stigma increases vulnerability to depression, low self-esteem, poor body image, maladaptive eating behaviours and exercise avoidance' (Gatineau & Dent, 2011, p. 14).

A whole-systems approach to address overweight and obesity

Traditional approaches that target obesity have tended to focus on single interventions in isolation, predominantly relying on individualistic models that emphasise personal responsibility and largely ignore social and environmental determinants. These approaches are typically unsuccessful in reducing overweight and obesity (Local Government Association, 2017). A simplistic solution is unlikely to solve a multi-faceted issue therefore a more coordinated and collaborative localised solution across the life

course is warranted. There is increasing recognition in the UK of the benefits of implementing a 'whole systems approach' for health issues such as obesity. Public Health England (2019b) suggest that a local 'whole systems approach to obesity epitomises a 'Health in All Policies' approach, drawing on local authorities' strengths, supporting their key priorities, and recognising that they can create their local approaches better and more effectively by engaging with their community and local assets' (p. 13). Subsequently, UK local authorities are utilising this approach to address the issue of obesity (Local Government Association, 2017). This means local authorities are finding opportunities to engage with multiple stakeholders and local communities across the wider system to 'tackle the more upstream drivers of obesity outside the [traditional] realms of public health' (Public Health England, 2019b, p. 14).

There is a growing body of evidence from other cities and regions including Amsterdam in the Netherlands (City of Amsterdam, 2015) and Victoria in Australia (Allender et al., 2016) whereby a whole systems approach has been implemented in efforts to tackle obesity, particularly childhood obesity. The aim of Amsterdam's Healthy Weight Programme is to ensure that 'a healthy choice is the easy choice' (City of Amsterdam, 2015, p. 1) by implementing a 10 pillars approach, which includes; (1) A healthy environment; (2) Engaging with neighbourhoods and communities; (3) A 'first 1000 days' approach (from the start of pregnancy to age 2); (4) Schools and workplaces; (5) Focusing on young people; (6) Focusing on children and adults with special needs; (7) Helping to regain a healthier weight; (8) Learning from research, evaluating what we do; (9) Digital technology; and (10) Behavioural science. The first six pillars contribute to the prevention of overweight and obesity, the seventh pillar offers support to people who are already overweight and the final three pillars help to facilitate and measure the first seven pillars (Hawkes, Russell, Isaacs, Rutter, & Viner, 2017).

Hertfordshire County Council (HCC) have proposed the implementation of a whole systems approach, adopting a slightly adapted version of the Amsterdam 10 pillars, to address the issue of childhood obesity across the county (Hertfordshire County Council, 2019). In a recent survey of 1600 parents in Hertfordshire, parents reported that healthy eating and healthy weight were among the top four issues they want advice and support on, alongside mental health and physical activity. However, there is little evidence about the key priorities identified by children and young people with regards to obesity. The nature of a whole systems approach is characterised by engagement with relevant stakeholders, therefore this should include children and young people. Engaging with stakeholders can identify key issues related to obesity, with relevance to local young people. Meaningful involvement can improve the relevance, methodological tools and interpretation of findings (Shaw, Brady, & Davey, 2011). In return, children and young people can also develop transferable skills, gain self-confidence, and improve self-esteem through their involvement (Shaw et al., 2011, Sonpal et al., 2019).

Stevenage was selected as the focus for this consultation, being one of four 'Populations in Focus' of the NIHR Applied Research Collaboration (ARC) for the East of England, which aims to involve local communities and stakeholders in identifying and addressing key issues of relevance to health and wellbeing (NIHR ARC East of England, 2019). About 19 per cent (3,400) of children in Stevenage live in low income families. As noted earlier, on average over a three-year period, a third of children aged 10 – 11 years are overweight or obese in Stevenage. This is higher than for most other districts within

Hertfordshire and higher than the average for Hertfordshire as a whole (Hertfordshire Public Health, 2019). Stevenage has lower than average numbers of primary and secondary school age children who are physically active and worse indicators of mental health and emotional resilience among young people than the average in Hertfordshire or the UK.

Consultation approach

Children and young people should be encouraged and facilitated to participate in decisions about their own care, and more broadly, about the health and social care services and policies that affect them (Chief Medical Officer, 2013). The benefits of working with children and young people are many, but most notably is the notion that young people can identify issues and questions that professional researchers or those designing services may miss or not prioritise. The involvement of members of the public or those with 'lived experience' in shaping health and social care is not new and is encouraged at national level (Department of Health, 2004).

One way to engage with young people is through consultation, which is when 'you ask them for their views and use these views to inform your decision-making' (Kirby, 2004, p. 10), other methods include community participation and coproduction (INVOLVE, 2019). We drew on recent engagement work (Johns, 2019) and guidance on inclusion in working outside school hours (Sonpal et al., 2019). In seeking young people's involvement, we aimed to gain insight to the issues that are important to them in an open, informal manner by trying out a variety of group work techniques. The use of written, verbal and mapping techniques allowed us to hear issues in a language that was meaningful to young people. The distinction is made between 'involvement' carried out 'with' or 'by' members of the public rather than 'to', 'about' or 'for' them (INVOLVE, 2012). Patient and public involvement (PPI) guidance suggested that formal ethical approval was not necessary at this pre-research stage (Health Research Authority & INVOLVE, 2016; Pandya-Wood, Barron & Elliott, 2017), however, we paid attention to good research practice in terms of how we approached working with young people. The aim was to find stakeholders or organisations to enable us to work with young people aged 11 – 16 years outside of the school term (during the summer break). We collaborated with Hertfordshire County Council's Public Health team to identify and approach local groups that could help us achieve these aims. We approached Stevenage Football Club who run the National Citizen Service (NCS) for young people aged 16 years in Stevenage. The group were meeting every weekday for two weeks in August at a local Stevenage school as part of NCS. This gave us the opportunity to work with the same group of young people on two occasions. The young people attended at least five different schools in Stevenage, so were not all familiar with each other before they convened for NCS. However, very few young people did not know anyone prior to the NCS. Many had attended the NCS with their pre-existing friendship groups from school. In addition, all young people attended a two-week NCS residential trip prior to the consultation and therefore had further established bonds with the larger group.

The authors considered the best ways in which to approach the topic of obesity with young people and how best to ask the groups about what is often considered a sensitive subject. After discussions with

colleagues involved with other NIHR ARCs, it was agreed that taking a broad approach would be appropriate. Rather than asking young people directly about obesity at the outset, we asked about their everyday lives and what it is like to live in Stevenage. First, it was hoped that asking about everyday life would reveal a wider range of determinants of obesity. Second, by asking about Stevenage specifically, we hoped this would lead to the development of localised strategies that reflect the context of living in Stevenage.

Overall, 56 young people (26 males, 30 females) aged 16 years participated in a consultative process over two separate visits. The young people participating lived in or around Stevenage and all attended secondary schools in the town. Throughout the consultation, young people worked in small groups of 4–6. The participants in each small group were determined by the young people themselves, meaning they were sitting with people they felt familiar and comfortable with. During the first visit, they discussed what it is like to live in Stevenage and their everyday lives. In the second visit they discussed obesity and how this might be related to their experiences of living in Stevenage. Two members of the research team facilitated the groups but where possible let the young people determine how to go about responding to the prompts provided. The research team occasionally sat with each group to listen to their discussion, ask additional questions for clarification or to facilitate further discussion. This approach was intended to limit the influence of the research team and to allow young people to take ownership of the process. Each visit was approximately 60 minutes long and is described further, below.

Visit One

During the first visit young people were asked to discuss in their groups what it is like living in Stevenage during two group activities: a mapping activity and a group discussion. First, the research team introduced the purpose of visit one, to find out what young people thought about living in Stevenage and how it related to their everyday lives and the lives of their peers. This session lasted approximately 60 minutes.

1. Mapping Activity of Stevenage

Young people were provided with a map of the town that identified some key places, including schools, leisure centres, parks and key transport links (e.g. the train station and motorway). The purpose of this activity was to facilitate discussion about the locality and to identify additional facilities or recreational areas in Stevenage relevant to young people. For example, these might include where young people spend their free time, how they travel around Stevenage and if there are any areas they avoid. This activity also acted as a prompt to examine if the lay-out of the town worked for young people. For example, they were asked to consider the practicalities and efficiencies of the cycle paths, walking routes and bus routes and how this might impact the services or facilities they use.

2. Group Discussion Activity

Following the mapping activity, young people were asked to discuss and write down what it is like living in Stevenage for a young person, using post it notes, flip chart paper and pens. This method meant that we could capture as much information as possible without the need to audio record each group. Young people could write down the key points raised in their groups without providing personal or identifying information. Young people were asked to think about and discuss the following: (1) what it is like to live in Stevenage for people of your age group; (2) what do you like about Stevenage; (3) and what do you not like about Stevenage. The purpose of the group discussion was to explore the factors in Stevenage that are important to young people that might influence or affect their lives. It also provided context for further discussion about overweight/obesity during the second visit.

Following these group discussions, young people were asked to think about and discuss; what they would change, how they would make improvements or what is missing for people their age in Stevenage. As a prompt, for example, they were asked to think about what they might do if they were in charge of Stevenage Borough Council. Again, they wrote their responses on post-it notes and flip-chart paper and the research team helped to facilitate discussion. The purpose of this discussion was for young people to start to think about the possible solutions to the issues they had raised during the previous group discussions.

Suggestion Box

At the end of the first visit, the research team explained what young people would be discussing during the second visit (the following week). They were informed that the second visit would focus on obesity and some of the issues they might consider to be key to our understanding of obesity and overweight in young people, drawing on their responses from visit one. Introducing this in advance meant that young people had the opportunity to think about relevant issues prior to the discussion in the second visit. To facilitate this discussion a 'suggestion box' was left in a central place at the school where the discussion groups were being conducted. Young people were informed that the box was there for them to post questions, ideas, issues, causes, consequences or words (to use or avoid when talking about obesity) that might relate to obesity. The suggestion box was accessible by all young people taking part in NCS at this location, regardless of whether they were part of the consultation. This meant that all these young people had the opportunity to make suggestions or ask questions without providing identifying information and without needing to speak out during a group discussion.

Following the first visit, the research team wrote fieldnotes, detailing any key themes and issues raised by young people during their discussions, but that may not have been written on post-it notes by the young people. The data collected from young people were then thematically organised by the research team to identify key issues salient to young people's lives in Stevenage, including the posts from the 'suggestion box' which were collected prior to the second visit. These themes were then used to direct

the discussion during the second visit in relation to obesity, around: (1) Affordability; (2) Crime and anti-social behaviour; (3) Transport; and (4) Places to go and to eat.

Visit Two:

The second visit occurred one week after the first visit, at the same location. This session lasted approximately 60 minutes and the same members of the research team facilitated the group discussions. Young people again separated themselves into groups of 4 – 6 people. These groups predominantly remained the same as the groups during the first visit, again determined by the young people themselves. The second visit consisted of three activities. Each group was able to move onto the next activity after they had completed the previous one and could work at their own pace. For the first activity, young people were asked to consider four specific questions relating to overweight/obesity:

(1) What does overweight mean to you?

(2) What words should we use when talking about overweight or obesity?

(3) Why are some people overweight and not others?

(4) What are the impacts of overweight/obesity?

These four questions were presented on a large sheet of A2 paper that was divided into four sections, with each section assigned to one of the four questions. Each group was presented with all four questions in this way. They were asked to write their responses using post-it notes and the researchers helped to facilitate discussion. Young people could discuss the questions freely and move from one question to another and then back again as the discussions within their group developed.

Secondly, upon completion of the first activity, young people were then presented with a second sheet of A2 paper divided into the four key themes identified from their discussions during visit one; (1) Affordability; (2) Crime and anti-social behaviour; (3) Transport; and (4) Places to go and to eat. Each group was presented with the same four themes. In their groups, young people were asked to discuss if, or how, these themes might be related to being overweight or obese. If they did not think they were related, then why?

Finally, after the second activity was complete, young people were asked what they thought some of the solutions might be to the issues they had raised about obesity in activities one and two during the second visit. In particular, they were asked to relate these solutions to Stevenage and think about what those in charge might be able to do for them or other young people their age. They were asked to write these solutions on post-it notes and attach this to an A3 sized sheet of paper.

Visit 1: Living in Stevenage

During the first visit, young people were asked what it is like to live in Stevenage. Four main themes emerged; Affordability; Crime and anti-social behaviour; Transport; and Places to go and to eat. These themes comprised of both positive and negative aspects regarding living in Stevenage and in some ways the themes also overlapped. For example, young people stated that they like the cycle paths and walkways which make it easier for them to travel. However, a fear of being 'mugged' or that some young people carry knives also dissuaded them from cycling to and from school. Issues relating to affordability often overlapped with transport or places to go and to eat. Although young people said that there are places for them to meet and socialise, such as parks or playing fields, other activities such as sports, going to the cinema or eating out are unaffordable for their age group. With regards to eating out, McDonald's was considered the favoured choice because it is quick and cheap to eat with friends in comparison to the other food outlets or restaurants available in the same area. Many also stated that there is little to do for their age group. Crime and anti-social behaviour were concerns for young people, in particular the fear of knife crime and gangs. Most young people either knew of or had a friend who has experienced crime. For example, having a bike stolen from school or having their bike stolen by someone with a knife outside of school.

Young people suggested solutions and changes that could be made to Stevenage to address some of these issues. For instance, the idea of a youth centre or a social space dedicated to young people where they can socialise with friends without having to interact too often with adults or engage in adult-led group activities was a popular suggestion. However, some also felt that this type of space may attract gangs and therefore not be sustainable as a safe space to socialise. Having easier access to affordable sport clubs and activities outside of school was also raised by young people. Many stated that the sports activities available are either too expensive, not adequately advertised, or too competitive (as opposed to playing sport for fun). Many said that they are not aware of any sports activities available to them in Stevenage. Others said that there are lots of opportunities to be involved with sports but that they are not widely advertised and that it is dependent on whether you know someone already involved. The availability of sports facilities is also dependent on the school young people attend. For instance one school provides free access to a gym on the school premises during lunchtimes and for a short period of time after school. Some young people criticised the free sports facilities available throughout the town, such as basketball and tennis courts, because they are not well maintained by the local authority and there are not enough of them.

The way that Stevenage looks was also considered important by young people and they suggested that the local authority should do more to care for the environment such as cleaning bodies of water, clearing litter and encouraging households to care for their homes by installing flower baskets and plants, at the authority's expense. By doing so, some young people thought that this would encourage others to care for the town too. Lastly, they suggested a greater police presence in the town, neighbourhood watch schemes and police talks in school to tackle concerns about crime.

Visit 2: Overweight/Obesity

During the second visit, young people were asked four specific questions about overweight/obesity and how it relates to their age group. Firstly, they were asked: **What does overweight mean to you?** Very few approached this question in terms of what the issue meant to them personally or as a group, rather they stated and discussed definitions. Most young people referred to scientific or medical approaches to overweight. Responses predominately referenced a BMI above 25, that those who are overweight 'weigh more than the average' or have 'excess weight'. However, it is not clear what 'the average' weight is or how it is determined. One young person indicated that BMI is 'inconsistent' because 'muscle[s] aren't counted in BMI' and two others referred to a fat to muscle ratio as a way of measuring if someone is overweight or not. Another stated that 'if people want to be unhealthy then they will be'. Two young people also stated that it meant 'unhealthy' and another that you 'don't do enough exercise'. Some young people referred to positive meanings stating that overweight means 'body positivity' or that being overweight/obese is 'not dangerous'.

Secondly, young people were asked: **What words should we use when talking about overweight or obesity?** Figure 1 presents the words suggested by young people in a word cloud.[1] Much like with the first question, young people used medical/scientific terms such as overweight or obese and one person suggested that 'if obesity is used in a medical setting then I believe the obese person will feel more determined to get to a healthy weight'. Many did not think that there is a need for specific words, other than overweight or obesity. Others used health related terms such as 'disease' and 'unhealthy'. Non-medical/scientific terms that were suggested largely related to shape/size, such as large, big, plus size, and curvy. There were also two responses that were humanising: to use 'person-first language' and 'their names', suggesting that we just focus on the person and not their weight. Most young people thought that the word 'fat' should not be used as it could be seen as offensive, but this was not elaborated on. One young person in particular questioned whether it is offensive or not and stated that they were not sure. The word 'thicc' was also suggested, a word commonly used on social media platforms to describe people, predominantly women and girls, with an overly curvaceous and exaggerated hour-glass figure, with a small waist and flat stomach. This shape/size is seen as aspirational for young girls/women. On social media images, this shape is generally achieved using photographic angles and body positions that enhance specific areas of the body, such as the hips and waist, to give the illusion of a 'thicc' bodily figure.

---

[1] The size of the words correspond to the number of times they were suggested by young people.

Figure 1: What words should we use when talking about overweight or obesity?

Numerous themes emerged from the third question young people were asked: **Why are some people overweight and not others?** The majority of factors raised related to both physical and mental health, as well as biological differences, for example differences in metabolism and genetics. Factors related to physical health included specific diseases or medical conditions such as endometriosis, hyperactive thyroid, polycystic ovary syndrome (or PCOS) and weight gain as a side effect of medication. Disabilities and the inability to be physically active due to chronic health conditions were also factors suggested by young people. Mental health was discussed predominantly in relation to food for example 'comfort eating', 'stress eating' and eating disorders leading to people becoming overweight because they eat 'too much food'. And mental health in general, but no other specific conditions were referenced.

The lived environment, physical activity and exercise were also key factors as young people suggested that a 'lack of exercise' or 'how much you exercise' can lead to someone being overweight. Interestingly one group suggested that 'being fat means you don't feel like you can do exercise. But doing exercise helps you lose weight'. Some young people said that having a sedentary job or a travel system designed around cars means that people are less likely to exercise or be physically active. Some young people also stated that being 'put off sports from PE as a child' and 'access to sports facilities' are possible explanations.

Young people stated that 'how much you eat' and that eating 'fatty foods', 'fast food' or an 'unbalanced diet' can lead to overweight. But food consumption was also interconnected with social issues such as income, including 'the cost of unhealthy food', 'money and where you live', 'poverty' and 'availability of food'. Young people stated that in supermarkets it is typically unhealthy food that is cheaper and available at discounted prices, meaning it is more difficult for those who 'can't afford healthy food' to eat

healthily. But also, a 'lack of time to have healthy meals' and the availability of 'cheap' burgers for 99p mean people are more likely to consume unhealthy 'fast' food.

Furthermore, media and marketing were also issues young people raised as being related to overweight/obesity and in some ways also related to what people consume. Young people stated that 'societal pressures' and the 'media representation of unhealthy body standards' are some reasons why people might be overweight. In particular, the marketing of food and the food that people eat generally were also considered important, for example the 'mass production [of] preservatives/processed food with lack of nutrition'. Some young people suggested that even 'healthy places promote unhealthy foods' such as within sports facilities.

Very few young people said that personal responsibility is the reason why some people are overweight, however some stated that a 'lack of motivation', 'no self-control' and a 'lack of effort and will to change' are why some people are overweight. One young person stated that 'people don't care', however it was not clear whether people become overweight because they do not care or because society does not care. Even those who did state weight is a personal responsibility were aware of external factors that are not within an individual's control such as the marketing and advertising of food. Interestingly, one group discussed a shop in central London that is named after and sells a well-known chocolate brand. They said that this shop deliberately releases the smell of chocolate into the store to encourage and entice consumers to buy their products.

Lastly, young people were asked: **What are the impacts of overweight/obesity?** Most young people were aware of the associated physical health impacts. For example, heart disease, diabetes and cancer were three health conditions frequently raised by the groups. Some also suggested that obesity leads to 'death'. Other young people proposed that it can lead to 'stress on organs', 'joint problems' and mean 'movement is limited'. The psychological consequences were also noted by many young people, predominantly in relation to 'mental health problems', 'low self-esteem' and 'depression. But others also said that it could lead to eating disorders, such as binge eating and anorexia if the person were to become fixated on losing weight. Young people were aware of the social impacts of overweight, in particular bullying was seen as an issue for young people who are overweight. Others stated that being overweight leads to 'stigma' meaning people do not want to talk about it. Lastly, only one person suggested that there are no impacts and another stated that 'if you are big you can be inspirational to other people who are also bigger than others'.

Local Issues Related to Overweight /Obesity

Young people were then asked if the themes that emerged in relation to living in Stevenage during the first visit were related to being overweight/obese, why and how. If not related, they were asked why not. These findings are outlined, below.

Affordability

Affordability was an issue that arose numerous times in relation to overweight/obesity. There were three ways in which young people related affordability to this: cost of healthy and unhealthy food; cost of gym memberships and other (physical) activities; and the cost of transport.

First, young people raised the issue of the cost of fast food. They said that 'fast food is cheap' and is therefore more affordable for those families and individuals on lower incomes, contributing to risk of overweight/obesity. 'Fast food is easier and more accessible' than healthy food. The affordability of fast food is a particular problem for young people who have few economic resources. Many said that they purchase cheap meals from McDonald's because it is an accessible, fast and affordable alternative compared with many of the other food outlets in Stevenage. Other food outlets and cafés are too expensive for their age group: 'We can only afford fast food so it's the only thing to eat.'.

Young people also argued that more generally 'access to cheap healthy food is limited' and that 'healthy food is more expensive'. It was felt that people become overweight or obese due to the unaffordability of healthy food. One young person suggested that cooking fresh healthy meals is difficult because 'fresh food [such as fruit and vegetables] requires constant purchase'. This means it has to be purchased regularly as it deteriorates more quickly than processed foods. This was considered problematic for those on low incomes, with limited mobility, limited time or those who live in areas with few places to purchase food.

Third, the cost of gym memberships and other (physical) activities were seen as prohibitive for those wanting to exercise or lose weight. Some young people already had gym memberships, but others who would like to have a membership said it was 'too expensive' for them. They also suggested that the cost for adults is a barrier too, meaning those who would like to lose weight or become healthier are restricted if they cannot afford to do so. Young people stated that activities such as football clubs and swimming are too expensive for them meaning that young people are possibly less likely to engage in physical activities. This may also be a particular problem for larger families if they want to go swimming, for example, because 'paying for sports clubs may be too much and more members in your family will increase the price'. Activities that are free were felt to be targeted at younger children, not adolescents.

Lastly, public transport was also said to be 'expensive'. Although young people can buy a 'savers' card for discounted prices on public transport, many stated that the upfront cost makes this unaffordable for them to buy. The prohibitive costs of public transport mean that it is more difficult for young people and those on lower incomes to participate in (physical) activities due to lack of access, which may lead to less opportunities for exercise. Interestingly, one young person linked the cost of public transport with food, stating that 'buses are expensive so people have less money to spend on healthy food'. In addition, the cost of public transport and the proximity of local gyms mean that for many of the young people in this study, even if they could afford the membership, the cost of travel is prohibitive.

Crime and Anti-Social Behaviour

Few young people explicitly stated that crime and anti-social behaviour directly leads to overweight or obesity. However, issues such as bullying and knife crime were thought to lead to less opportunities for exercising or being physically active. For example, if an overweight person is being bullied, they may not want to leave their home or socialise. Young people said that bullying or risk of bullying is a particular issue for young people who are already overweight/obese. They suggested that this may be the reason that overweight adolescents do not want to socialise away from home, attend activities or the gym because they are bullied and stigmatised for their weight.

Young people suggested that others may not want to leave their home due to a fear of gangs and knife crime. Several young people said that they have friends who have had their bikes stolen and that this would lead some people to avoid cycling therefore being less physically active. A fear of walking in the dark or using the underpasses to cross busy roads at night may also lead people to use alternative modes of transport (e.g. driving cars). Alternatively, one young person argued that being overweight could act as a protection for some young people, in gangs for example, because it makes them look bigger. This meant that they become less of a target and the additional body mass may protect them from injuries if they are attacked. It can also make them look more threatening.

Transport

Young people thought that transport could be related to risk of obesity as people may choose to drive cars instead of walking and cycling, meaning they have less opportunities for active travel. Young people liked that there is a good cycle and footpath system within Stevenage because these modes of transport 'count as exercise' and is a way to 'burn calories'. They argued that the footpaths and cycle paths 'encourage people to walk [and] cycle'. However young people also stated that the reliability of public transport discourages people because 'cars are more reliable' and the buses are often late, cancelled or do not run to specific parts of the town easily. They also suggested that the way some aspects of the public transport system is designed might lead to a negative experience for overweight people, for example they 'might need special seating'.

Places to Go and Places to Eat

As noted, during visit one young people stated that although there are sports facilities and clubs in Stevenage, they are not widely advertised and sometimes dependent on availability within schools. During visit two, young people again discussed this issue in relation to overweight/obesity. They said that the free sports facilities, such as basketball and tennis courts, are not well maintained and that there are not enough facilities for them to use. This means that there are few opportunities for young people to join clubs or be physically active in their free time.

In many ways, discussions about the places that young people go to socialise with their friends was also linked to affordability, for example the availability of fast food restaurants. In particular, eating food with friends at Mcdonald's was not necessarily about eating the food, it was considered a place to go

and socialise with friends. In comparison to other places such as the cinema or a sit-down resturant, it was also seen more affordable for young people, as discussed earlier: 'going to eat is cheaper than doing an activity'. One young person also stated that eating out is a social occasion for 'indulgence' and that they do not want to have to think about eating something healthy. They suggested that all of these factors are related to being overweight/obese because it is 'too easy to get fast food', there is a lack of 'visibility of healthy food' and they 'never [see] ads for healthy food', meaning people are more likely and are encouraged to eat unhealthily. It was considered a contradictory message when places such as gyms and sports facilities are situated close to fast food resturants and takeaways.

What are the Solutions?

Young people were asked about possible solutions to some of the issues they raised. The solutions were predominantly associated with the affordability of food, activities, transport and events for young people. Cost is often prohibitive, and many young people thought that discounted events, facilities and activities would be beneficial for them, and as a way of addressing levels of overweight locally. Table 1 summarises the solutions suggested by young people, disaggregated by five of the ten pillars from the ten pillars approach; (1) Healthy environment approach; (2) Neighbourhood and Community Approach; (4) Schools and Workplaces Approach; and (5) Focus on Young People; and (7) Helping people to regain healthier weight.

Table 1: Solutions suggested by young people to address overweight and obesity in their local town in relation to the associated themes.

1. Healthy Environment Approach	- More pathways and cycle lanes. - Ban cars in the town centre. - Remove advertisements for fast food restaurants on bus tickets and replace with adverts for healthy food, for example free fruit. - Increased and improved police patrols to prevent bikes from being stolen. - Increased street lighting, especially in the winter months. - Reduce the cost of healthy food such as fruit and vegetables/ Increase the cost of unhealthy food. - Decrease the number of fast food and takeaway outlets. Increase the number of healthy food outlets to give people viable alternatives, like fruit and vegetable markets. - Regulations so that shops have to relocate healthier foods to the front of shops or by the tills. - Regulations to change the way food is cooked in fast food restaurants; baked instead of fried. - Regulations to stop the advertisement of unhealthy and/or fast food. - Provide free fruit. Fast food outlets could offer free fruit bags. - Make public images about obesity more graphic, similar to cigarette packaging.

2. Neighbourhood and Community Approach	o Areas for young people to socialise where gangs or knife crime will not be an issue. o Encourage people to walk or cycle, rather than driving, e.g. via a financial incentive. o Build an athletics track for young people to use that is free or cheap. o Provide affordable gym equipment people can use at home. o Increase the advertisement of local sports activities, clubs and events. o Make gyms more accessible by building them in residential areas. o Increase the number of local sports activities available for young people, for example a rock climbing club. o Build more skate parks for young people. o Organise fun runs for charity. o Make sports activities and clubs more affordable for young people and their families.
4. Schools and Workplace Approach	o Teach young people about respecting others, in particular those who are overweight or obese. o Raise awareness about healthy foods and diets by educating people about food. o Raise awareness about obesity in schools. o Promote sports in schools. All schools should encourage students to participate in sports. Secondary schools could make PE compulsory for all students.
5. Focus on Young People	o Events about obesity that are specifically targeted at young people. o Decrease the cost of public transport for young people to discourage the use of cars. o Encourage young people to be physically active and engage in sports outside for school by reducing the cost of gym memberships and sports facilities or activities for young people. o Introduce more programs like NCS for young people o Increase the number of healthy food outlets that are affordable for young people
7. Helping people to regain healthier weight	o Dedicate one day per week in gyms for overweight people who may feel self-conscious about exercising in front of others. o Provide discounted gym membership for people who are already overweight. o Introduce more campaigns like Change 4 Life.

Conclusion

Hertfordshire County Council have adopted the Whole Systems approach to address obesity and consider the wider determinants of health. Childhood obesity has been identified as a health priority and involving young people is seen as an important part of service design. The collaborative project between Hertfordshire County Council and the University of Hertfordshire enabled young people to voice issues that were important to them using informal small group discussions and a variety of different techniques. The sessions started by looking at general issues rather than focussing on obesity and allowed young people to identify a broad range of factors that might not ordinarily be linked with the prevalence of obesity. The young people discussed what it was like to live in Stevenage and identified themes around affordability, crime and anti-social behaviour, transport and places to go and eat. These findings will inform NIHR ARC EoE research relating to 'prevention and early detection'. The young people discussed possible solutions and these will be fed into the Hertfordshire County Council obesity plans and shared with relevant stakeholders such as schools, the Youth Council, the child healthy weight network and Council colleagues, particularly in the Stevenage area. The learning will also help to shape future youth engagement and communications plans for the NIHR ARC EoE and more broadly in terms of public engagement with young people in Hertfordshire.

References

Allender, S., Millar, L., Hovmand, P., Bell, C., Moodie, M., Carter, R., ... Morgan, S. (2016). Whole of systems trial of prevention strategies for childhood obesity: WHO STOPS childhood obesity. *International Journal of Environmental Research and Public Health*, *13*(11).

Chief Medical Officer. (2013). Annual Report of the Chief Medical Officer 2012: Our Children Deserve Better: Prevention Pays. London, UK: Department of Health.

City of Amsterdam. (2015). *Summary of Programme Plan*. Amsterdam Healthy Weight Programme.

Davies, S. C. (2019). *Time to Solve Childhood Obesity*. London, UK: Department of Health and Social Care.

Department of Health. (2004) *Patient and Public Involvement in Health: The Evidence for Policy Implementation*. London, UK: Department of Health.

Gatineau, M., & Dent, M. (2011). *Obesity and Mental Health*. Oxford, UK: National Obesity Observatory.

Hagell, A., & Shah, R. (2019). *Key Data on Young People 2019*. London, UK: The Health Foundation.

Hagell, A., Shah, R., Viner, R., Hargreaves, D., Varnes, L., & Heys, M. (2018). *The Social Determinants of Young People's Health*. London, UK: The Health Foundation.

Hawkes, C., Russell, S., Isaacs, A., Rutter, H., & Viner, R. (2017). *What can be Learned from the amsterdam Healthy Weight Programmes to Inform the Policy Response to Obesity in England?*

London, UK: Obesity Policy Research Unit.

Health Research Authority & INVOLVE. (2016). Public Involvement in Research and Research Ethics Committee Review. Retrieved 18 November, 2019, from https://www.invo.org.uk/wp-content/uploads/2016/05/HRA-INVOLVE-updated-statement-2016.pdf

Health Survey for England. (2018a). *Health Survey for England 2017 Adult and Child Overweight and Obesity*. London, UK: NHS Digital.

Health Survey for England. (2018b). Weight. Retrieved October 9, 2019, from http://healthsurvey.hscic.gov.uk/data-visualisation/data-visualisation/explore-the-trends/weight.aspx?type=child

Hertfordshire County Council. (2019). Public Health and Prevention Cabinet Panel. Healthy Weight in Hertfordshire. Retrieved 11 November, 2019, from https://democracy.hertfordshire.gov.uk/documents/s9249/05. Item 5 - Healthy Weight Panel Report.pdf

Hertfordshire Public Health. (2018). *Hertfordshire Public Health Briefing Note. National Child Measurement Programme (NCMP)*. Hertfordshire, UK: Herts Health Evidence.

Hertfordshire Public Health. (2019). *Stevenage Ward Profiles*. Hertfordshire, UK: Herts Health Evidence.

INVOLVE. (2012). *Briefing Notes for Researchers: Public Involvement in NHS, Public Health and Social Care Research*. Southampton, UK: INVOLVE.

INVOLVE. (2019). *Co-production in Action*. Southampton, UK: INVOLVE.

Johns, T. (2019) Reaching Out. Retrieved 18 November, 2019, from https://www.invo.org.uk/current-work/reaching-out/

Kirby, P. (2004). *A Guide to Actively Involving Young People in Research: For Research team, Research Commissioners, and Managers*. East Sussex, UK: INVOLVE.

Local Government Association. (2017). *Making Obesity Everybody's Business*. London, UK: Local Government Association.

NIHR ARC East of England. (2019). About Us. Retrieved November 11, 2019, from http://www.arc-eoe.nihr.ac.uk/about/

Public Health England. (2019a). *National Child Measurement Programme England, 2018/19 School Year*. Retrieved November 11, 2019, from https://digital.nhs.uk/data-and-information/publications/statistical/national-child-measurement-programme/2018-19-school-year

Public Health England. (2019b). *Whole Systems Approach to Obesity*. London, UK: Public Health England.

Ralston, J., Brinsden, H., Buse, K., Candeias, V., Caterson, I., Hassell, T., … Woodward, E. (2018). Time for a new obesity narrative. *The Lancet*, *392*(10156), 1384–1386.

Pandya-Wood, R., Barron, D.S. & Elliott, J. (2017). A framework for public involvement at the design stage of NHS health and social care research: time to develop ethically conscious standards. *Research Involvement & Engagement,* 3: 6.

Reilly, J. J., & Kelly, J. (2011). Long-term impact of overweight and obesity in childhood and adolescence on morbidity and premature mortality in adulthood: Systematic review. *International Journal of Obesity*, *35*(7), 891–898.

Shaw, C., Brady, L.-M., & Davey, C. (2011). *Guidelines for Research with Children and Young People.* London, UK: National Children's Bureau.

Simmonds, M., Llewellyn, A., Owen, C. G., & Woolacott, N. (2016). Predicting adult obesity from childhood obesity: A systematic review and meta-analysis. *Obesity Reviews*, *17*(2), 95–107.

Sonpal, K., Walker, E., Swallow, V., Brady, L-M. , Stones, S. (2019). *Report on Involving Children and Young People in Research.* Southampton, UK: INVOLVE.

Viner, R. M., Ozer, E. M., Denny, S., Marmot, M., Resnick, M., Fatusi, A., & Currie, C. (2012). Adolescence and the social determinants of health. *The Lancet*, *379*(9826), 1641–1652.