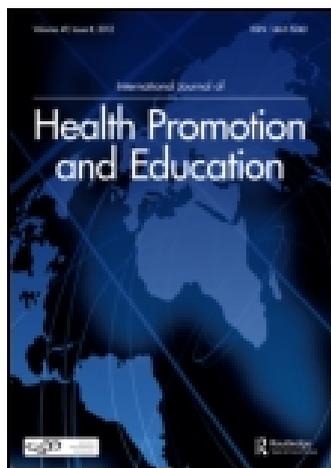


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Sugar-sweetened beverages: availability and purchasing behaviour within the school fringe

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In the UK, over 61% of adults and 30% of children are obese; sugar-sweetened beverages (SSBs) are acknowledged to be a contributor to this obesity epidemic due to their high sugar content and lack of nutritional value. This study focussed on a secondary school in the North West of England, with the aim of evaluating pupil's exposure to, and opportunities to buy SSBs on their journeys to and from school and during the school day, along with their purchasing behaviours. Data were collected using mapping exercises and focus group interviews. Results showed that SSBs could be purchased very cheaply within the school fringe. All participants in the focus groups claimed to consume SSBs, although the frequency of consumption varied. Taste was the most important factor when purchasing drinks. Although the selection of beverages for sale varied, the majority were found to contain high levels of sugar, with very few low or non-sugar options available. Participants were largely unaware of the sugar content in SSBs. The study highlights the need for a multi-factorial approach in order to decrease the consumption of SSBs in children and young people. Recommendations include health promotion in schools around the detrimental health consequences of excess sugar intake, working with local authorities to restrict SSB retailing close to schools and homes, working with retailers to improve the provision of healthy beverages in their stores and addressing the issue of price, potentially by the implementation of a sugar tax.

Keywords: sugar-sweetened beverages; children; obesity; school fringe

1. Introduction

The UK has some of the highest levels of obesity in the world (Gallagher 2013) and has shown an upward trend over recent years, with the Department of Health (2013) estimating that 61% of adults and 30% of children are overweight or obese. Obesity is responsible for increased levels of cardiovascular disease, cancers and type 2 diabetes (WHO 2013). Obesity-related diseases are estimated to cost the NHS more than £5 billion every year (Department of Health 2013), not including the additional costs to society such as productivity losses and lower quality of life.¹

As a route to help tackle the negative consequences that arise in society from increased levels of obesity, taxation on energy-dense foods has been discussed in the UK as a means of altering individuals' consumption patterns (Mytton, Clarke, and Rayner 2012; Nnoaham et al. 2009). Sugar-sweetened beverages (SSBs) are acknowledged to be a contributor to the obesity epidemic due to their high sugar content and lack of nutritional value (Ng et al. 2012; Briggs et al. 2013; Vartanian, Schwartz, and Brownell 2002). There has been support for a tax on SSBs from numerous organisations and health professionals (Roberts 2013). Briggs et al. (2013) estimated that a 20% tax on SSBs would lead to a

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reduction of obesity prevalence by 1.3% in the UK, which is equivalent to 180,000 fewer obese individuals. The greatest reductions were estimated to be in young people as these were found to be the largest consumers of SSBs, a finding that has been echoed by insight work undertaken throughout communities within the North West (Timpson, Lavin, and Hughes 2013). Insight work conducted by Liverpool John Moores University has also shown that social and environmental factors play a role in the consumption of SSBs, with many young people reportedly consuming SSBs on their journeys to and from school.

Despite the introduction of nutritional standards in the majority of schools (not including academies) and the regulation of unhealthy foods and drinks from 2007, pupils still have many opportunities to purchase unhealthy food and drinks in the wider school environment (NICE 2010; Children's Food Trust 2011). A Public Health England report (2013) researched the opportunity to limit fast food outlets, particularly surrounding schools through planning regulation, and several local authorities have drafted supplementary planning documents that prohibit the opening of new takeaways/fast food outlets within the school fringe (classed as a 400 m radius) in order to tackle the obesity epidemic among young people in the UK. The report highlights the need for environmental change through planning law to help people make healthier lifestyle choices more easily. A pilot study by the Children's Food Trust (2011) examined the purchases and consumption behaviours of students across four secondary schools in Oxfordshire and Rotherham on their journeys to and from school. The main findings showed that after confectionary, the most frequently purchased item was soft drinks. Purchases were largely influenced by opportunity, the mode of transport and the number of shops available. Marketing and advertisement within outlets influenced the decision to purchase, as did the amount of money pupils had.

This study aimed to map the availability of SSBs within the school fringe; to evaluate exposure to, and opportunities for, children and young people to buy SSBs on their journeys to and from school and during the school day, and also their purchasing behaviours.

The objectives of study are as follows:

- (i) Map the prevalence and range of premises selling SSBs within a defined area in close proximity to a large secondary school.
- (ii) Collect data regarding in-store presentation, marketing and price inconsistencies of SSBs.
- (iii) Work in conjunction with a secondary school, identifying any opportunities on the school grounds to purchase SSBs, current school food policy on SSBs and advertising of unhealthy foods and drinks.
- (iv) Recruit a sample of students to map the number of opportunities they have to purchase SSBs on their school journey.
- (v) Conduct three focus groups of between 4 and 8 pupils in grades 7–8 (age 11–13), grades 9–11 (age 14–16) and sixth formers (age 17–18) to examine purchasing and consumption behaviour of SSBs in the school fringe and environment.

1.1 School context

This study focussed on the availability of SSBs within the school fringe of St Mary's Catholic College, a mixed comprehensive secondary school with 1618 pupils aged 11–18. The school is located in the town of Wallasey, Wirral, an urban town in the North West of England, inhabited by mainly middle- and working-class residents. Of the 1618 pupils at

St Mary's Catholic College, 611 (38%) are eligible for pupil premium grant. St Mary's Catholic College provided consent to be named in this paper.

2. Methodology

- (1) The school fringe was identified (classified as a 400 m radius from the school gates), and premises selling SSBs were marked on a map and colour coded to distinguish the type of establishment.
- (2) The researcher visited a sample of the premises within the school fringe and recorded the range and price of SSBs on sale. A total of 25 premises were identified; however, 5 of these were not open for the entire school day, so were discounted. Of the remaining 20 premises, 11 were randomly selected by the researcher to visit and assess.
- (3) A face-to-face interview was conducted with the Deputy Head to discuss the food and drink policy within the secondary school.
- (4) A mapping exercise was completed with two mixed groups of pupils ages 11–15 and 17–18 (sixth form), with a total of 19 pupils. To be eligible to take part in the study, pupils needed to travel to and from school by foot or bicycle, unaccompanied by a parent or guardian. Pupils were selected to take part by a senior member of support staff at the school.

Pupils illustrated the part of their journey in the school fringe (either to or from school) on a paper copy of the map provided. They also completed a short survey concerning their SSB purchases. For pupils aged 17–18, the survey included additional questions concerning their consumption of SSBs during the school day. This was included as this age group is allowed to leave the school premises during school hours. Pupils taking part had to have at least one journey in which they walked or cycled to/from school, or to/from a bus stop or train station. Pupils who were driven were excluded. An activity was carried out before the mapping exercise to ensure that the pupils knew what the term 'SSB' meant. For younger pupils, this involved presenting photographs of a range of popular beverages, and asking pupils to state whether they thought each one was sugar sweetened or not. The interviewer then provided the correct answer following each example. For older pupils, a short discussion took place at the beginning of the session where the interviewer explained the term sugar-sweetened drinks and was able to answer any questions.

- (5) The sampling for the focus groups consisted of three mixed gender groups, with pupils in grades 7–8, 9–11 and sixth form. Consent was required from each pupil to take part in the study; this was gained verbally by the senior member of support staff who selected the pupils to take part. Qualitative methods were deemed the most appropriate way to collect data as the researcher was aiming to gain an understanding of the pupils' experiences, ideas, beliefs and values around SSBs and SSB consumption behaviour. Also, due to the nature of the study, and the range of ages and academic abilities of the pupils, a qualitative method of data collection was considered the most suitable to ensure consistency in regards to the quality of the responses.

3. Findings

3.1 *The availability of SSBs within the school fringe*

A mapping study was conducted within a 400-m fringe of both school entrances, which identified 25 premises that sold SSBs. The premises were split into categories (Table 1).

Table 1. Type and availability of premises selling SSBs within the school fringe.

Type of premises selling SSBs	Number of premises on the 400-m school fringe
Newsagent	5
Sandwich shop	6
Cafe	2
Takeaway/fast food outlet	7
Supermarket/convenience store	3
Petrol station	1
Fruit juice and smoothie bar	1
Total	25

Results showed that the largest category selling SSBs was takeaway outlets. Although these tend not to open until after 5 pm, one take-away outlet in close proximity to the school gates was open during lunch time, providing access to sixth form pupils. Five newsagents and six sandwich shops all sold a range of SSBs. A fruit juice and smoothie bar sold freshly made milkshakes, which contained high amount of sugar; however the window display focussed more on healthy drink options (Table 1).

3.2 Range cost and marketing of SSBs

Of the 25 premises identified, 11 were visited to establish the range and cost of SSBs available. Table 2 shows the price and availability of the beverages on sale within the school fringe.

All of the premises visited, excluding the fruit juice and smoothie bar, sold cans of Coca-Cola and other branded drinks, with prices ranging from £0.39 to £0.95. One premises sold non-branded versions of cola, lemonade and cherryyade for £0.25. The majority sold energy and sports drinks, some with promotional offers. Additional promotions included 1–2-litre bottles of SSBs for £1.00 (including Lucozade), three cans for £1.00 and buy one get one free. These promotions were displayed either on shop windows, or visibly within the premises.

Of the 11 premises studied, only one had a promotion for a healthier beverage, offering Innocent Smoothies for £1.00. Seven of the premises sold water; however, in five of these (71%), SSBs could be purchased for less than the price of a bottle of water. Although most premises that sold SSBs also sold diet versions, these only accounted for a small selection of the drinks available.

Table 2. The price and availability of beverages on sale within the school fringe.

Type of beverage	Price ranges	Number of premises available for purchase
Cans (330 ml)	£0.25–0.95	10
Bottles (500 ml)	£0.95–1.55	7
Isotonic sports drinks (including Lucozade)	£0.45–1.59	7
Energy drinks	£0.35–1.99	7
Still water	£0.30–1.00	7
Flavoured water	Not known	4
Slushy drinks	£0.50	1
Fruit smoothies	Not known	3

Table 3. Characteristics of the participants who completed the mapping exercise.

Group	Number of pupils	Age range	Gender
A	13	11–15 (school years 7–10)	7 females; 5 males
B	6	17–18 (sixth form)	3 females, 3 males
Total	19		

3.3 School policy

The school has a policy that prevents the sale of SSBs within the school grounds, and also pupils bringing their own SSBs into school. They operate a ‘stay-on-site policy’ for pupils in grades 7–11, with only sixth form pupils allowed to leave the school site during the day.

The school holds a yearly ‘Healthy Eating Week’ in which pupils are encouraged to eat and drink more healthily.

3.4 Mapping journeys to and from school

A total of 19 pupils took part in the mapping exercise: Group A consisted of 13 pupils aged 11–15, and in Group B, there were 6 pupils aged 17–18 (Table 3).

Of the 19 participants who completed the mapping exercise, 74% (14) reported purchasing SSBs on their journey to or from school. The frequency of these purchases is shown in Figure 1.

Results from the mapping exercise showed that Lucozade and Coca-Cola were the most popular drinks, with seven pupils reporting that they purchase these items (Figure 2). Energy drinks were also purchased by two of the pupils, as were a variety of other popular branded drinks.

Using data from the mapping exercise and the frequency of purchase questionnaire, it is clear that three pupils went out of their way to visit an SSB retailer during their journey. These three pupils, along with two others reported purchasing SSBs from a discount store, where energy drinks could be purchased for £0.30, cans of branded SSBs for £0.39 and slushy drinks for £0.50.

Pupils in Group B ($n = 6$) were given an additional set of questions. These questions focussed on purchases made within school hours, as these pupils were given permission to leave the school premises during the day. Results showed that four out of the six participants reported purchasing SSBs during the school hours, with three of the pupils purchasing SSBs every day. The most popular brands were Lucozade, Coca-Cola and Fanta. As with Group A, Group B reported purchasing SSBs not only from newsagents and convenience stores, but also from sandwich shops.

3.5 Focus group findings

Focus groups were conducted with 19 pupils aged 11–18 years. The participants were split into three groups depending on their age: Group A (11–13 years) $n = 7$; Group B (13–15 years) $n = 8$; Group C (16–18 years) $n = 4$. The number of pupils in Group C was slightly lower than originally anticipated due to non-attendance by some pupils.

3.5.1 General consumption

All participants stated that they consumed SSBs; however, the frequency varied (Table 4) with a few stating ‘not very often’, while others consumed SSBs more regularly. Group A reportedly drank SSBs the least, with group B reportedly drinking the most.

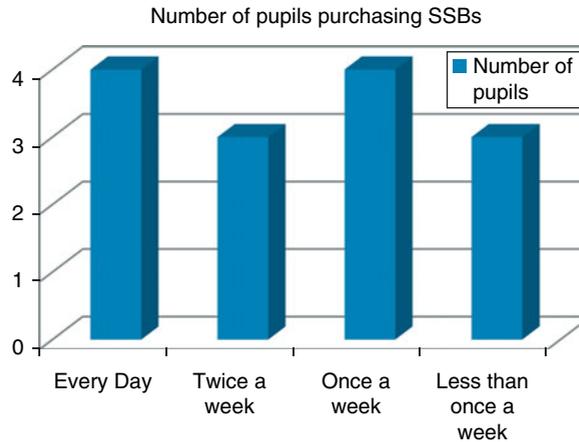


Figure 1. Frequency of SSB purchases on school journey.

All participants stated that they drank SSBs because they like the taste. For Group A, SSBs were seen by some as a treat they might have at home, whereas none of the participants from Group B or C considered this a reason for consumption. Two pupils in Group B stated that they drank SSBs for energy and taste (Table 5).

3.5.2 Consumption in school and during the school journey

When asked where they usually consumed SSBs, Group A said they mainly drank them at home, with all participants stating they did not drink them in school; 55% of the participants in Group A also reported that they drank SSBs at fast food outlets such as McDonald’s, as they would receive a drink as part of a meal. Although none of the pupils in group B reported that they drank SSBs in school, they were aware of others that did. See Table 6 for qualitative results.

3.5.3 Spending, advertisements and favourite drinks

The vast majority of the participants agreed that the most they would usually spend on an SSB would be £1.00; however, one participant stated that they do not pay attention

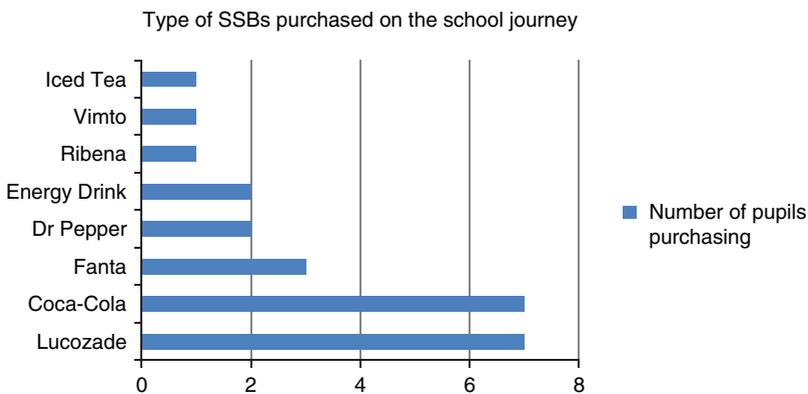


Figure 2. Types of SSBs purchased by pupils on their journeys to or from school.

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Table 4. Frequency of SSB consumption in the focus group.

Group	Number of pupils		
	Daily	3–4 times a week	Once a week
A	0	3	4
B	3	5	0
C	1	1	2

to prices. Some of the younger pupils reported that price would not really influence where they purchased drinks from as it depended more on where they were and what was on offer. Older pupils agreed that they would visit a different shop if they knew it was cheaper. This may indicate that young people are more cost conscious as they get older.

Participants reported that they received money to purchase SSBs from parents as lunch money; some younger participants mentioned pocket money. Advertisements and promotional offers on SSBs were found to have some influence over the choices the participants made, as they were more likely to purchase a drink if there was a special offer, but did not seem to be especially influenced by brands (Table 7).

The most favoured SSB among participant groups differed; with half of the younger pupils (Group A) reporting a preference for McDonald's milkshakes, whereas energy and isotonic drinks were more favoured by older pupils in Groups B and C.

3.5.4 Sugar content awareness

Participants were asked to guess how many sugar cubes were in four different SSBs, a 300-ml can of Coca-Cola, a 500-ml bottle of Ribena, a 300-ml bottle of Lucozade and a large McDonald's milkshake.

Table 5. Qualitative data – general consumption of SSBs.

Participant (group)	Response
Question: Do you drink SSBs? B1 (B)	Absolutely everyone drinks them
Question: How often do you drink SSBs? G1 (A)	Not that much really
B1 (A)	Probably about three times a week
G2 (A)	We don't really have them in the house so I don't really drink them that much
G1 (B)	A few every week
G2 (B)	I drink squash every day does so does that count? I didn't think it did
B1 (B)	I drink them every day
Question: Why do you drink SSBs? B2 (B)	Just cause they taste nice or of I'm thirsty. *Everyone else in the group agrees with this*
B1 (B)	I drink them for energy sometimes
G2 (B)	I try to mainly drink water but sometimes it's a bit boring and you want something sweet
G1 (B)	I drink energy drinks like Lucozade just before I have dance in school for energy

Table 6. Qualitative data – consumption of SSBs during the school journey.

Participant (group)	Response
Question: Do you ever drink SSBs on your way to school in the morning?	
B2 (A)	Not in the morning, no. *Others nod in agreement*
G3 (A)	I get a lift to and from school and there isn't a shop by me so I don't have a chance. If I want one I'll just go to McDonald's and get one when I get in
B1 (B)	Yea I do, I drink a 35 p energy drink every morning when I meet my mate on the way to school from the shop near his
B2 (B)	I don't but I know people that do, like have the big bottles of Lucozade and stuff on the way to school
B1 (C)	It's more just a thing like while you're in school, I don't really
Question: Why do you usually drink them in the morning?	
B1 (B)	Just for energy really
Question: Do you have breakfast before?	
B1 (B)	Yea, I usually have like some toast then get a drink
Question: Does anyone drink them on the way home from school?	
G2 (A)	Not really no. *Others agree*
B1 (A)	Sometimes if at the end of the day I feel a bit like eugh (sighs) I'll go the shop at the front before I go the back way and get one for some energy before I skate home
Question: And what do you normally get?	
B1 (A)	Probably just like a can of something

All participants underestimated the sugar content of the first drink (300-ml can of Coca-Cola) by approximately two-thirds. However, once pupils were aware of how much sugar was in the first drink, their subsequent guesses were more accurate. Group C estimated the sugar content of the beverages more accurately than those pupils in Groups A and B.

The participants were surprised by the amount of sugar in each of the SSBs, especially when seeing a visual display. Pupils in Group B asked how much sugar was in other examples of SSBs (Table 8).

4. Discussion

There were 25 premises within the school fringe selling SSBs, with pupils reportedly making purchases from a variety of these outlets. This supports the findings of previous research that showed that pupils regularly make purchases of confectionary and soft drinks on their school journey (Sinclair and Winkler 2008; Children's Food Trust 2011). Location and ease of access to SSB retailers have been shown to affect consumption. Skidmore et al. (2010) looked at the accessibility of convenience stores and found that living closer to convenience stores was also associated with an increased consumption of high-sugar food and drink, and that distance to and density of food outlets are both associated with children's food choice. However, direct evidence to link proximity to

Table 7. Qualitative data – spending, advertising and favourite drinks.

Participant (group)	Response
Question: How much would you normally spend on a drink?	
G1 (C)	50 p to £1
G2 (C)	I don't really know, I don't look at prices, just go for the one I want the most
B2 (C)	I wouldn't really spend more than £1 on one
B1 (C)	£1 or maybe a bit more depending on where you go for it
Question: Do advertisements or brands influence your choice?	
G2 (C)	Not personally like but I do think it influences a lot of people
G1 (C)	And you don't see many drinks adverts on TV, you only really see like Coke or Pepsi so you don't see as much
Question: If you saw any special offers inside shops or on shop windows would this influence what you buy?	
G1 (C)	Like normally if I've got enough money I'll buy like three cans for £1 cause they're really cheap
B1 (C)	If I know there's an offer on somewhere already then I might go and get it
Question: What are your favourite SSBs?	
G2 (A)	McDonald's milkshakes
B2 (A) & G1 (A)	Yea me too. *Another pupil nodded in agreement to this*
B1 (A)	I really like ice tea does that count?
B1 (B)	Monster
B2 (B)	I like Relentless
B3 (B)	I've never tried like Red Bull or anything
G1 (B)	I did once but it gave me a headache
B1 (B)	They don't do anything to me
Question: So do you buy them for energy?	
B1 (B)	Just for the taste
B2 (B)	Taste yea, and they do like loads of different flavours
G1 (C)	I normally just get like the 50 p energy bottles like the juice ones

retail outlets selling unhealthy foods and health outcomes is limited, and this may be a challenge for those working to restrict or reduce the density in a given area. NICE (2010) recommendations suggest that restricting planning permission for takeaways and other retail outlets in specific areas (within walking distance of schools) would have a positive impact for the prevention of cardiovascular disease.

The school in this study has in place a policy banning the sale and consumption of SSBs on the school premises. Although similar policies have been found to lower consumption during school hours, research suggests they may not have an effect on overall consumption and that schools are a relatively minor source of SSBs for adolescents (Wang, Bleich, and Gortmaker 2008). Johnson et al. (2009), Blum et al. (2008) and Fletcher, Frisvold, and Tefft (2010) found the association between in-school SSB availability and SSB consumption modest and given the mandatory changes to school food policy in recent years, this is likely to remain. Taber et al. (2012) found that in the current obesogenic

Table 8. Qualitative data – sugar content of SSBs.

Participant (group)	Response
Question: How many sugar cubes are there in a 500 ml bottle of Lucozade?	
B2 (C)	I think that's got the lowest in, cause it's got like loads of other stuff in doesn't it, like caffeine and stuff
G1 (C)	You see like people drinking the bigger bottles of that if it's cheap on offer, if it's cheap in the shop I'll have it for the whole day, I won't just drink it all at once like some of them do. I'll leave it for the whole day and have some for lunch and stuff
Question: Would you still drink the same amount of SSB knowing the sugar content?	
B1 (A)	Wow, I didn't know Ribena had that much
G1 (A)	Yea, I won't drink that again probably cos you think that it's gonna be healthier cos it's got fruit
B1 (A)	Yea they advertise that well
B2 (A)	I'll still drink them all even though I know
G2 (B)	Definitely won't be drinking as many or I will less often. *G1 and some others agree*
B1 (B)	I'll still drink them as much
G2 (C)	Yea, I would
B1 (C)	I don't tend to drink them that much anyway
B2 (C)	I don't know, I tend not to go for like the Cokes and the Lucozades and stuff, I tend to go for the more flat stuff cause they're not quite as bad
B1 (C)	I always go for the ones with the least sugar in anyway, or no sugar so if I had flavoured water I'd go for one with no sugar
G2 (C)	See I'm the opposite, I go for the ones with the sugar in, if it's got sugar in, I'll go for it

environment, young people have countless ways to obtain SSBs from local shops, fast food restaurants and other food outlets in their community. This emphasises the importance of using a multi-factorial approach to reduce consumption, which includes, but is not restricted to, limiting accessibility outside of the school premises. Morrison's, one of the UK's leading supermarket chains, has recently taken the step to impose a ban on the sale of energy drinks to under 16s due to the high levels of caffeine (Smithers 2013). This move is a positive step towards tackling some of the harms of SSBs and one that should be echoed by others. Given the scarcity of robust evidence to link proximity with health outcomes, working with shop owners to moderate the choice and promotion of products may achieve a more immediate outcome and help to support behavioural change in young people.

All the participants in this study stated that they drank SSBs primarily for taste, and research shows that taste is considered the most important factor in food (Glanz et al. 1998) and soft drink selection in children (Timpson, Lavin, and Hughes 2013; Grimm, Harnack, and Story 2004). Diet alternatives (or bottled water) were not available to purchase in all of the outlets, limiting choice, which could be a reason as to why the young people consumed more SSBs rather than healthier alternatives. Whether the participants had tried diet alternatives and rejected them on taste grounds was not apparent.

Another important factor in food and drink selection is cost, and a number of studies have demonstrated that adolescents and children are price-sensitive (French et al. 1999, 2001), with cost rated as the third most important reason in selecting snacks and drinks, following taste and hunger. There was a wide availability of SSBs within the school fringe premises, many of which were relatively cheap (from £0.25) and/or part of a promotion. It is likely that the offers and promotions on SSBs make them more attractive and accessible than if they were sold at the standard price. Older pupils stated that they are more likely to purchase SSBs if they know that they are on offer, or if they see offers within the shops. A female pupil stated: 'Like normally if I've got enough money I'll buy like 3 cans for a £1.00 'cause they're really cheap.' Many of the promotional offers were on energy drinks, such as Monster, Relentless and Lucozade, which were also some of the most popular with the older pupils. It is likely (though not evidenced) that the older pupils in this study had more money to spend on SSBs than the younger group. Their preference for 'energy' drinks, which were also the most heavily promoted, may indicate that this group is the most at risk from the effects of consumption. Bottled water was more expensive than the cheapest SSBs in the outlets visited, making them a less attractive option on grounds of cost and taste. Given the importance of cost when selecting beverages for the older pupils in this study, the introduction of a tax on SSBs may have a positive impact in reducing consumption in this group.

Pupils in this study were largely unaware of the sugar content of SSBs. Results from the focus groups show that while new knowledge surrounding the sugar content of these drinks was unlikely to change consumption behaviour in some, others stated that they would now reduce their intake. It is unclear to what degree the participants understood the detrimental effects of excessive sugar intake, and there were some misinformed views on diet drinks as an alternative with one boy commenting 'yea, but doesn't diet drink have all other stuff in that's bad for your brain like aspartame'. In addition, this study shows that despite numerous education campaigns promoting water over the past decade, young people generally still do not understand the benefits that water consumption can have on health.

Whether health education surrounding sugar intake or the benefits of drinking water would result in decreased SSB consumption in these young people is debatable, as the often used phrase 'knowledge gain does not equal behavioural change' suggests. However, without the knowledge, they are unable to make an informed choice.

4.1 Conclusion and recommendations

It is acknowledged that the rise of obesity and overweight in children and young people is a complex problem and no single intervention or activity will reverse the trend. However, there is growing evidence that frequent consumption of SSBs could be a major contributing factor in this upward trend. This study suggests that local activity to reduce exposure to promotions and opportunities to purchase SSBs by children and young people as they travel to and from school and equipping them to make informed choices may be an achievable target for local authorities and the NHS.

The cumulative impact of multiple premises selling and promoted SSBs in the school fringe should be addressed. This requires collaborative working and a focus on the responsibility of local planning authorities to promote healthy communities.

Working with local businesses to encourage healthier provision, local authority (public health departments) and community NHS providers should highlight health campaigns and available resources to support retailers and encourage change in the focus of promotions.

A lack of knowledge around the sugar content in SSBs and the health benefit of drinking water are highlighted in this study. Appropriate health education in the school setting would enable young people to make informed choices and is a critical element in tackling the rise of overweight and obesity.

4.2 Limitations

The authors acknowledge that this was a small study within one school setting. The participants were chosen by a member of the senior management team within the school and may not be a representative sample of that school.

Note

1. This introduction section draws heavily on Ennis (2013).

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