In your face

– about the food environment of children and their exposure to food advertisements

Hjärt-Lungfonden

Karolinska Institutet

unicef
för alla barn

It is bad with this, all this advertisement for unhealthy food, sweets, energy drinks and so on. And it´s always ***in your face****.*
It is more advertisement for unhealthy foods that you see all the time and gets affected by. Like this campaign with half price on ice cream. It was everywhere, everyone had seen it. It was in media, everywhere. And it was that everyone was buying ice cream all the time. It was, yeah.

Child, Stockholm

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All images in this report that show food advertisements and company logos have been generated within the framework of the Karolinska Institute project. The images are used to illustrate a systemic problem in the food environment of children and young people and are not intended to single out individual companies or products.

Content

Preface

Food is essential for good health. Access to nutritious and healthy food is also crucial for the health and development of children and young people. However, the current trend is heading in the wrong direction. Unhealthy dietary habits have become one of the main causes of ill health and premature mortality in Sweden. This is not only a public health issue, but also a children's rights issue. Statistics from the Public Health Agency in Sweden show that the proportion of 11–15-year-olds in Sweden living with overweight has more than doubled over the last 30 years (between 1989/90 and 2017/18). During the same period, the proportion of children living with obesity increased fivefold.

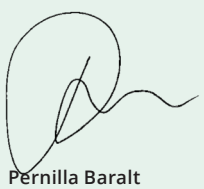
The aim of the Heart Lung Foundation is to give people a longer and healthier life. The Heart Lung Foundation distributes money for heart and lung research and spreads knowledge to enable the greatest possible success in the fight against disease. The Heart Lung Foundation also works to influence decision makers to work towards a society in which healthy living is easy.

The United Nations Children's Fund (UNICEF) works to ensure that the rights and needs of all children are met and that all children can reach their full potential. UNICEF works to mobilise resources and commitments for children's rights in Sweden and globally, influencing decision makers and providing information and educates about the Convention the Convention on the Rights of the Child. UNICEF is also responsible for contributing to the implementation of the 2030 Agenda, in particular, the goals related to children's and young people's health and development.

Our common vision is that all children should have good and equal opportunities for good health and well-being throughout their lives. This is something that every child has the right to, under the Convention on the Rights of the Child, which has been part of the Swedish law since 2020. Unhealthy eating habits affect children's health and development, risks deteriorating their quality of life and increases the risk of mental illness. It is also associated with a higher risk of overweight or obesity in adulthood, which can result in a wide range of health problems such as type 2 diabetes, high blood pressure, cardiovascular disease, lung disease and cancer. Living with excess weight is also an early marker for cardiovascular disease later in life.

Poor dietary habits are important determinants of obesity. It is easy to think that the responsibility of making healthy food choices lies mainly with the individual or with parents. With this report, we want to demonstrate how complex it is for children and young people, as well as adults, to make healthy food choices. We also want to show from children's own perspectives how they perceive and are influenced by their food environment. Through children's own photographs and words, the reality emerges; how children are exposed every day to advertising messages that favour unhealthy foods over healthy and nutritious foods; food promotions with messages that shape their preferences and choices.

Today's food environment does not promote enough of the food that children need, and too much of the foods that is harmful to their long-term health. This needs to change. As adults, we are responsible for reversing this trend and placing the children's rights and health at the centre. But we also have to involve children in this process. Together we can create an environment that promotes better health for all.



Pernilla Baralt
Executive Director, UNICEF Sweden

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Secretary General, Heart Lung Foundation

PART 1 Background

1. UNHEALTHY DIETARY HABITS AND THEIR CONSEQUENCES

Poor dietary habits are responsible for a large part of the global disease burden. Today, almost one third of the world's population lives with overweight or obesity (1). Among children and adolescents aged 5–19 years, 340 million were estimated to be living with overweight or obesity in 2016 (2) and 39 million children under the age of five years were living with overweight or obesity in 2020 (2). Our current eating habits increase the risk of further exacerbating this trend. In the future, this will result in a higher prevalence of people living with risk factors for non-communicable diseases such as heart and lung diseases (3) and diabetes (4), as well as a higher prevalence of all-cause mortality (4).

Obesity is currently estimated to cause approximately 5 % of all deaths globally (4,5). In fact, the increased risk of mortality from severe obesity is equivalent to the increased risk of premature death due to smoking (4,6). Overweight and obesity at an early age is also associated with an increased risk of obesity in adulthood (7). Obesity has also been associated with mental illnesses such as depression (8) and other social and mental health challenges (9).

Compared to other countries in Northern Europe, there are still relatively few children in Sweden living with severe obesity (10), and obesity in general (11). However, the proportion of children in Sweden living with obesity is still high (12), and we are now facing a worrying trend, as the prevalence of overweight and obesity has more than doubled over the last 30 years. The proportion of children aged 11–15 years living with obesity has increased fivefold during the same period (13, 14) and this increase has been in line with the global trend.

There is great variation in the prevalence of obesity between different geographical areas in Sweden. Areas of high socio-economic status (SES) are less affected than areas of lower SES (15).

What is obesity?

Obesity is defined as a body mass index (BMI) larger than 30.

Severe obesity is a BMI greater than 40.

BMI is calculated as body weight in kg/body height in metres squared.

For children and adolescents, the BMI threshold for obesity is age and sex specific. Obesity in such populations is therefore defined by the use of growth curves.

What is socioeconomic status (SES)?

A combination of:

- Level of education
- Income
- Occupation

SES is usually described as high, medium, and low. In addition to the above mentioned factors, ethnicity is often included in the term.

2. WHAT IS CAUSING AND DRIVING THE PROBLEM?

The cause of overweight and obesity is overconsumption of energy in relation to the body's energy needs (16). The fact that we consume more than we need can, in turn, be attributed to external factors such as environment, culture and social context, and internal factors, such as individual behavioural patterns and genetics (16). Our food environment, i.e., the social and physical environment in which we live, influences our attitudes, preferences, and food choices.

Factors in our food environment that affect how we eat:

- Range of food
- Price
- Taste
- Availability
- Culture
- Socio-economic circumstances
- Social norms

Today there is a far greater variety of food compared to 30–40 years ago. Not only are we exposed to foods and beverages in supermarkets and eating establishments, but in many different contexts. One factor that plays a major role in people's choices and consumption is food marketing. Every day we are exposed to a variety of food advertisements in different contexts, directly and indirectly, both online and offline. This has a major impact on both our perception of food and on our eating habits (17).

Ultra-processed foods have a negative impact

It is likely that one of the main drivers behind the rising prevalence of overweight and obesity is the dramatic increase in the availability of so-called "ultra-processed" foods (18). Several studies have shown that the high availability of ultra-processed foods results in over-consumption of energy from food (19–22) which, in turn, results in weight gain.

Large-scale epidemiological studies have shown an increased risk of developing overweight and obesity over time in people who have a high consumption of ultra-processed foods compared to those who consume this type of food in smaller amounts (23–25). In addition, mass production of ultra-processed food is not environmentally sustainable as it requires large amounts of water, energy, and land, and leads to carbon dioxide emissions (26).

In Sweden, the consumption of ultra-processed foods has increased by 142% while the prevalence of obesity has doubled, from 5% in 1960 to 11% in 2010 (27). Furthermore, a survey from the Swedish Food Agency, Riksmaten ungdom (self-reported data) shows that only 1 in 10 children reached the dietary recommendation of consuming 500 grams of fruit and vegetables per day, with a self-reported average intake of 150 grams per day (28). In addition, a large proportion of children had a high calorie intake from snacks such as sweets, biscuits, crisps, and sugar-sweetened beverages (29). Most children also consumed too much salt, with the main sources being processed meats, pizzas, hamburgers, cheese, and bread (30).

3. MARKETING OF ULTRA-PROCESSED FOODS

One important external factor that has been shown to increase the consumption of ultra-processed food, and thus accelerate the development of obesity, is the marketing of these types of food (31, 32).

The growing literature on outdoor food advertising shows that the advertising landscape in multiple countries is dominated by advertisements for ultra-processed foods, often including fast foods and sugar-sweetened beverages such as soft drinks (33–62). These types of advertisements often account for 70–90% of all food advertisements.

In Sweden, objective studies have shown that advertisements for ultra-processed foods dominate over other types of food advertisements, both in areas of high and low socio-economic status in Stockholm (63), and in more sparsely populated rural areas (64).

Food environments dominated by advertisements for ultra-processed foods are problematic as they have normative effects on the food choices and purchasing behaviours of both children and adults (65). These types of environments have been associated with an increased intake of energy from food, and children have been shown to be particularly susceptible to exposure to food advertisements (31, 66). The literature leaves no doubt that advertising campaigns for ultra-processed foods have a strong impact on the prevalence of overweight and obesity over time, particularly among younger generations (19, 66).

For example, experimental studies indicate that children who are exposed to food advertising on TV for a certain period of time have a higher energy intake immediately after the exposure, compared to children exposed to non-food advertising(67). The increased energy intake tends to come from ultra-processed foods rather than healthier foods (31). This type of advertising also appears to have a greater effect on children with overweight or obesity compared to children of normal weight (17, 67).

What are ultra-processed foods?

Foods that have undergone heavy industrial processing and often contain many added ingredients such as sugar, salt, fat, artificial colours, flavours, and preservatives.

A large part of ultra-processed foods can also be referred to as "unhealthy foods", "non-core foods", "junk food", "fast food", "discretionary food" and "obesogenic food".

In this report, ultra-processed foods specifically include sugar sweetened beverages, artificially sweetened beverages, energy drinks, fast foods, and snacks, such as hamburgers, pizzas, kebabs, hot dogs, fried chicken, ready-to-heat dishes, instant soups and noodles, sweets, pastries, ice cream and salty snacks.

What is advertising?

Something that is shown or presented to the public to help sell a product or to make an announcement.

Advertising is part of the broader term marketing.

Marketing is defined as advertisements and other business activities which are intended to promote the sale of and access to products, including a retailer´s actions, omissions or other measures or behaviours before, during or after sale or delivery of products to consumers or retailers.

- The Marketing Act (2008:486)

4. PUBLIC HEALTH WORK IN SWEDEN

The two most important tools for relevant public health work in Sweden are the Public Health Policy framework and the 2030 Agenda with the Sustainable Development Goals (68, 69). The current public health policy framework was adopted by the government in 2018 and comprises an overarching goal and eight target areas (70). The overarching goal is to "Create societal conditions for good and equal health for the whole population and to end the preventable health gaps within one generation" (69). One of the target areas includes the promotion of healthy lifestyles, with a focus on limiting the availability of products that are harmful to health and increasing access to health-promoting products and environments.

In its report about the food environment (17), the Public Health Agency of Sweden states that studies on the Swedish food environment are few and that more studies should be conducted. More knowledge is needed on what the food environment in Sweden actually looks like and how it affects food consumption and health. Studies are now being conducted in several other countries to map and evaluate food environments. The overarching goal of this work is to raise awareness of how the environment we live in affects our eating habits and to create better conditions that support healthier eating habits (17).

There are several government missions associated with healthy and sustainable food consumption. The missions, which are presented below, are being carried out by the Swedish Food Administration and the National Public Health Agency.

In 2016, the Swedish Food Agency and the Public Health Agency of Sweden were commissioned to develop a supporting document for measures aimed at promoting healthy eating habits and physical activity. This resulted in a document containing seven action points, including the use of economic instruments to promote healthy eating habits. More specifically, it proposed restrictions on the advertising of unhealthy foods to children and the increased use of, for example, taxes and subsidies (71).

In 2021, the two agencies were given a new mission: to submit proposals about how national targets for sustainable and healthy food consumption should be designed (72). In addition, proposals for measures and indicators for monitoring will be developed. The work is based on the public health policy objectives, with a particular focus on public meals and how food is exposed to consumers (72). The results of this mission will be reported by January 2024, at the latest.

An additional mission assigned to the two agencies in June 2022 was to submit proposals for objectives and indicators for monitoring of the work to promote sustainable and healthy diets among children and adolescents (73). Particular emphasis will be placed on groups with less favourable socio-economic conditions, as well as meals served in public institutions and environments, particularly those institutions and environments that are publicly funded such as swimming pools and sports facilities (73). The results are expected to be reported by January 2025, at the latest.

In their interim report on these tasks, both agencies stress the importance of the perspective of children and young people. They emphasise that children and young people are dependent on adults and other actors to access sustainable food, and that early health promotion and preventive measures create prerequisites for better living conditions when they become adults. Finally, it is important that children, as the food consumers of the future, have the opportunity to offer ideas and suggestions for creating healthy eating habits (74).

PART 2 What type of food environment are children and young people exposed to today?

This project has been conducted to identify and better understand children's food environment, focusing on quantifying their actual, real-world exposure to outdoor food advertisements. The methods used have been chosen to put children's perspectives in focus and to better reflect children's actual experiences and thoughts about food advertisements. These methods can be a valuable complement to the more traditional research-focused methods that otherwise dominate the literature on food advertisements. It is important that this type of mapping is carried out to provide a basis for the implementation of changes that protect children from the harmful effects of food marketing.

In the spring of 2022, after receiving the appropriate ethical permission, the Department of Biosciences and Nutrition at the Karolinska Institutet asked pupils in four schools in Stockholm and Gävle to document their environment in order to identify the messages they encounter related to food. This project aimed to document, from the pupil's own perspective, how they perceive and are influenced by their food environment in Sweden.

2.1. ABOUT THE PROJECT

The aim of the project was to gain a better understanding of what children's food environment looks like in Sweden today, and their level of exposure to outdoor food advertisements. A total of 54 pupils (aged 13–14 years) from four different schools participated in the project. Data provided by the pupils were used to identify local "hotspots" for food advertisements (areas where the pupils are exposed to many food advertisements). Using this methodology, it was possible to map the pupil's everyday exposure to outdoor food advertising.

The project also investigated what the pupils themselves thought about their food environment and what they thought could be done to promote healthier eating habits.

What is a "hotspot" for food advertisements?

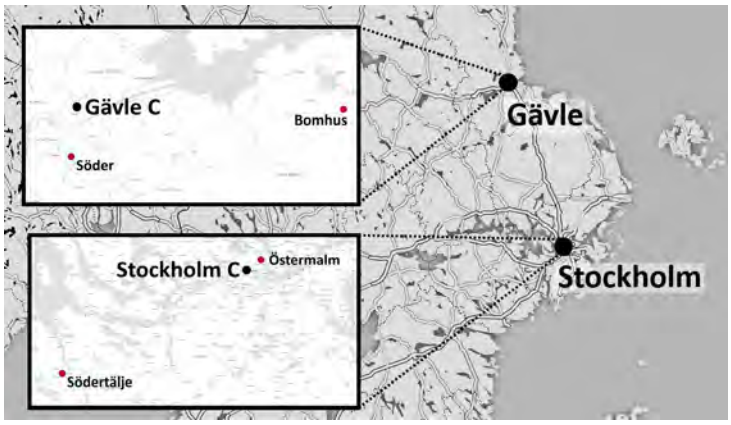
In this project a hotspot refers to an area with a high density of images of food advertisements taken by the pupils.

2.2. PARTICIPATING SCHOOLS

The four schools that participated in the project:

- A school in central Stockholm in an area with high SES (Östermalm)
- A school in an urban area outside Stockholm with low SES (Södertälje)
- A school in central Gävle (Söder)
- A school outside central Gävle (Bomhus)

Both of the schools in Gävle were located in areas with average SES in relation to other areas in Sweden.



Maps showing the location of schools in Stockholm and Gävle.

2.3. OBJECTIVE QUANTIFICATION OF THE PUPIL'S EXPOSURE TO OUTDOOR FOOD ADVERTISEMENTS

The first part of the project involved 45 of the 54 participating pupils and aimed to: i) locate areas where the pupils are exposed to outdoor food advertisements and ii) investigate the proportion of all food advertisements that promoted ultra-processed foods compared to more health-promoting foods.

The pupils received instructions regarding:

- How to install a research app on their smartphones
- How to identify food advertisements
- How to take pictures of food advertisements

The pupils were given instructions on how to take pictures of the outdoor food advertisements they encountered in their daily lives. They were instructed to avoid taking pictures in situations where they did not feel safe and to avoid taking pictures of people's faces. Based on GPS data from the pictures of food advertisements taken by the pupils (a total of around 1,300 images), it was then possible to map the food advertising hotspots.

Each hotspot area identified from the pupil's pictures was subsequently visited by the project team, who then documented all food advertisements in the area (a total of approximately 3,000 images) using smartphones. The total size of the included hotspot areas was 750,000 m^2. Each image was then analysed using an image annotation software. The analysis was based on an annotation guide that had previously been developed by the project team.

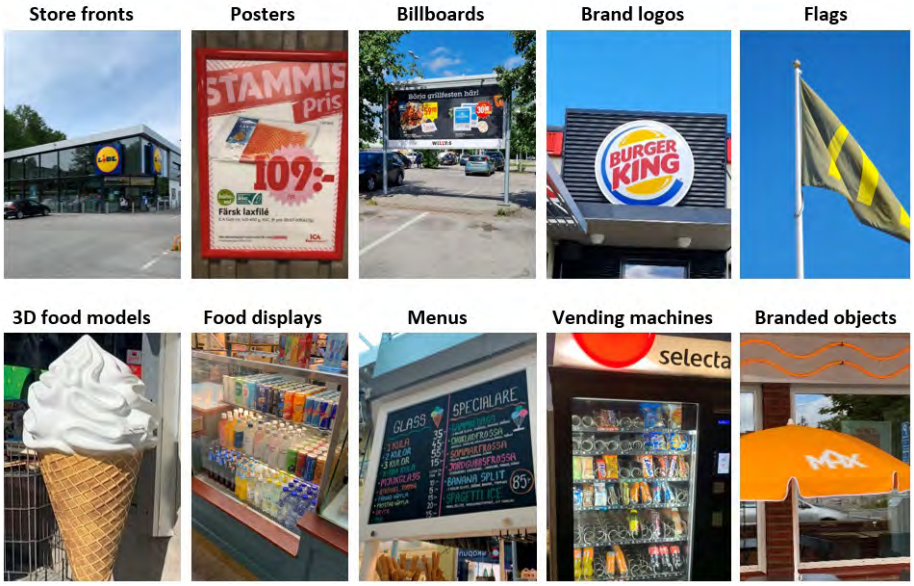
The food advertisements were analysed based on the following:

- Fast food (i.e., hamburgers, kebabs, pizzas, fried foods, ice cream, pastries and sweets)
- Sugar sweetened beverages
- Artificially sweetened beverages
- Fruits
- vegetables and berries
- Fish and seafood
- Alcoholic beverages
- Energy drinks

Fast foods, sugar sweetened beverages, artificially sweetened beverages, energy drinks and alcoholic beverages were then merged into one category called "ultra-processed foods" in accordance with the NOVA classification system (75).

Fruits, vegetables, berries, fish, and seafood were merged to form the category "Fruit, vegetables, berries, fish and/or seafood".

The two merged categories formed the main outcome variables and informed the results of this report.



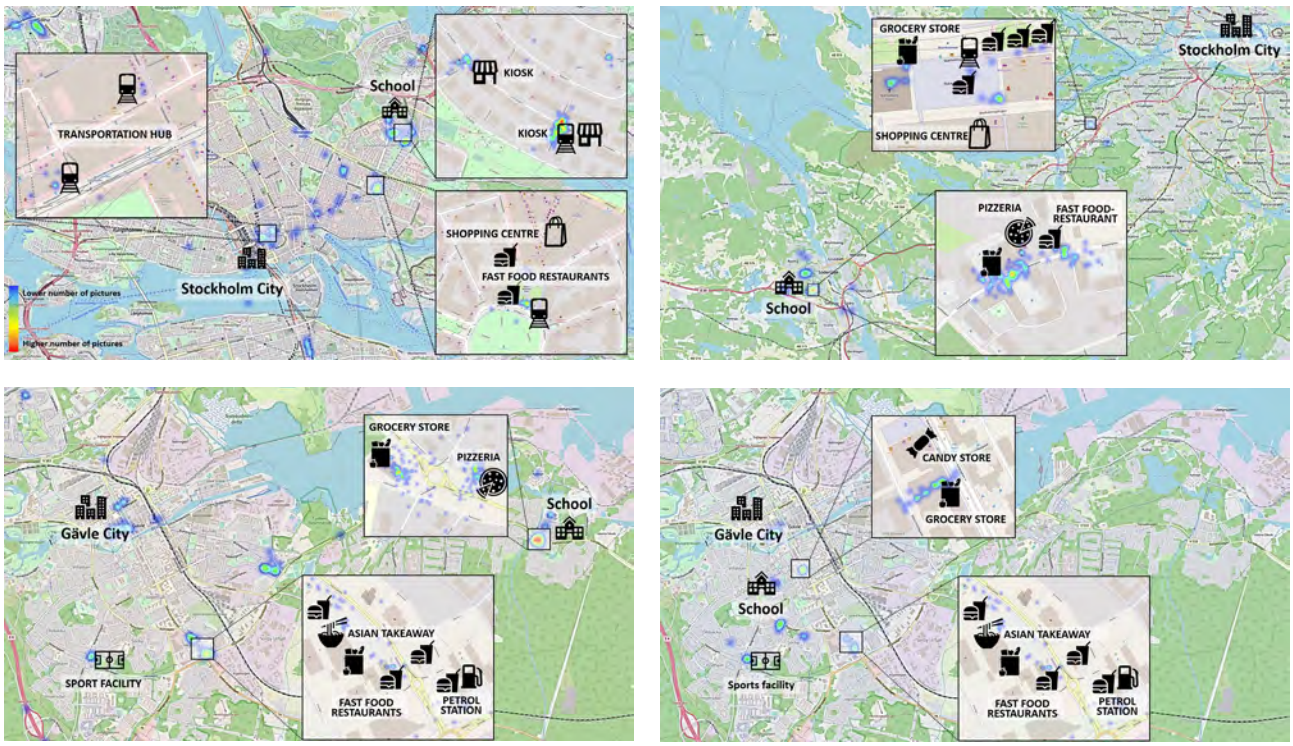
Different types of outdoor advertisements in the Swedish context. All the presented pictures were collected during the project.

2.4. PICTURES TAKEN BY THE PUPILS: THE IDENTIFICATION OF HOTSPOT AREAS FOR FOOD ADVERTISEMENTS

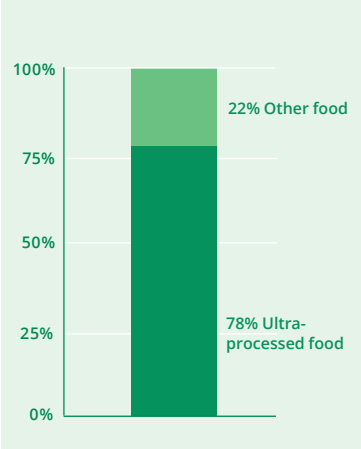
Key ”hotspot” areas for food advertising are listed and illustrated in the table and figure below.

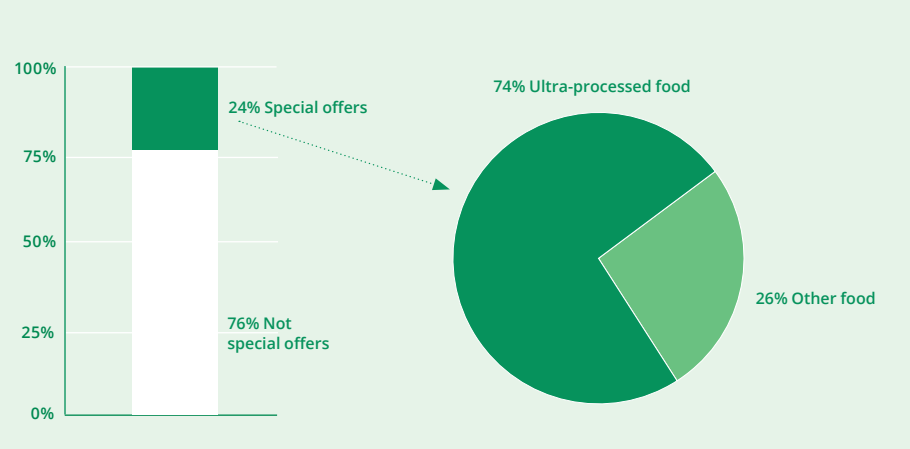
SCHOOL	”HOTSPOT” LOCATION
Stockholm	
Urban school	At supermarkets and convenience stores near the school
	In transportation hubs used by the pupils
	In the Stockholm city centre area where shopping centres/streets are located
	Around shopping centres outside central Stockholm
Suburban school	Around a supermarket near the school
	Around local fast food outlets
	Around local petrol stations
	At a large shopping centre closer to central Stockholm
Gävle	
Urban school	In the shopping district of Gävle city centre
	At supermarkets and convenience stores near the school
	At fast food outlets near local sport facilities that the pupils use
Suburban school	At a supermarket and a fast food outlet near the school
	At supermarkets on the road to Gävle city centre
	In the shopping district of Gävle city centre
	At fast food outlets near local sport facilities that the pupils use

Identification of hotspot areas for food advertising in the two cities.



Pictures showing hotspot areas in relation to the participating schools. The zoomed-in rectangles show the selected areas in greater detail.





The children's exposure to outdoor advertising for food in all the areas combined.

2.4.1. Advertisements for ultra-processed foods dominate the food advertisement landscape

The analysis of the food advertisements conducted by the project team in all the different hotspot areas showed that 78% of all food advertisements promoted ultra-processed foods. Only 21% promoted fruits, vegetables, berries, fish, or seafood.

The dominance of advertisements for ultra-processed foods was evident in all areas regardless of the city (Stockholm or Gävle), whether the school was located inside or outside of the central parts of the city, and the socio-economic conditions of the areas in which the schools were located. These observations demonstrate the scale of the problem.

2.4.2. More special offers for ultra-processed foods

The analysis also showed that around one in four food advertisements contained some type of special offer (e.g., "buy 3 pay for 2" or products offered at a reduced price). Most of these offers (74%) were for ultra-processed foods or beverages.

Only 20% of food advertisements included special offers for fruits, vegetables, berries, fish, or seafood. These results were also consistent between all the cities and areas that were analysed.

2.5. THE PUPILS PERSPECTIVES ON THEIR FOOD ENVIRONMENT

In the next step, the pupils sat together in focus groups and discussed their experience of participating in the project and their experiences of their food environment. A total of six focus groups discussions were conducted with a total of 31 pupils. The focus group discussions lasted between 30–50 minutes and were conducted at the schools.

Questions discussed by the pupils:

- Their experience of taking pictures of food advertisements
- What they think about their food environment
- Whether they would like to change anything about their food environment
- Their views on the availability of healthy food in their everyday lives

Based on the focus group discussions, the following five themes, which were discussed by all the pupils, were identified:

- Food advertisements are everywhere
- Special offers for ultra-processed food are very appealing to children
- Children prefer ultra-processed foods
- Healthy food like fruits and vegetables are available, but are not attractive
- The pupil's thoughts on how the food environment can be improved

2.5.1. Food advertisements are everywhere

The pupils expressed surprise at the number of food advertisements that surrounded them and all the different channels on which they were exposed to food advertisements. The pupils also stated that before participating in the project, food advertisements were not something they had particularly noticed. After the project, however, the pupils realised that they had been surrounded by food advertisements for so long that they have become a natural part of their environment.

> *– No, it's like a normal surrounding, it's always been there, a bunch of like food advertisement.*
> *– Like trees.*
> *– Yeah, like trees. You are used to it, so It's like, it's nothing you really think about, it's just there, it's been there like forever so.*
> **Child discussing Stockholm**

> *Kind of, like I said, it's become quite normal so people don´t think about it so much. But if you focus on it, you'll will notice that it's everywhere. There are 3D versions and stuff, it's on billboards, it's on screens, there are newspapers, there are ads on your phone, it can be anything.*
> **Child, Stockholm**

While several of the pupils stated that they understood that companies need to advertise their products in order to succeed, most of them stated that they found advertisements annoying at times. Specifically, the pupils found food advertisements particularly annoying if they were hungry, making them feel compelled to purchase the food that was being promoted in order to satisfy their hunger.

> *It's annoying when there are food advertisements everywhere when you are hungry as well. You walk around and there are food advertisements wherever you look. Then you get even hungrier and feel you have to buy something.*
> **Child, Gävle**

The pupils also found it annoying when there were too many advertisements, they were repetitive or in inconvenient places, for example, in windows or on pavements and bike routes.

Moreover, several pupils believed that constant exposure to advertisements could affect them and the people around them, even if they didn't always realise it themselves. For example, the pupils stated that seeing advertisements for unhealthy, ultra-processed foods could elicit cravings for buying/consuming such foods. It was also generally understood that advertisements for unhealthy foods occur more frequently than advertisements for healthy foods. The pupils themselves understood that this could have negative health implications.

> *I also think, how they can attract people with unhealthy food, I mean they mostly have advertisements for unhealthy food, and they don´t think about that these people will have, it will be bad for their health if they eat, if you eat it too much. They don´t think about that.*
> **Child, Stockholm**

WHERE WERE THE PUPILS EXPOSED TO FOOD ADVERTISEMENTS?

Outdoors

On their way to/from school

Around transportation hubs (metro stations, bus stations)

In indoor and outdoor shopping areas

Near sports facilities

Online

On social media such as YouTube and TikTok

In podcasts and on Spotify

On websites

On TV

In mobile games

Other

In papers and on flyers

2.5.2. Special offers for ultra-processed food are very appealing to children

The pupils also talked often about special offers for food, such as "buy 3 pay for 2" and promotions for reduced prices. The pupils found such offers very appealing since they thought that they could "save money" by purchasing such products. Some of the pupils believed that special offers could tempt them to buy more than they initially planned, and that they could potentially affect their choice of food or snack.

> *It´s also extra appealing when there's a discount. 2 for 1 and then it's cheaper than what it usually is. Then it's extra appealing to buy. If it is a discount.*
> **Child, Gävle**

> *Yes, like, if you want something on a Friday, then you want something tasty to eat. Then you see that there's a special offer on crisps, so you'll buy that instead of sweets.*
> **Child, Gävle**

The pupils also felt that special offers for food were very popular in general, with the food items on offer often being out of stock in the store.

> *I also think it's very interesting how they manage to attract people with these kinds of special offers and so on. And it works pretty well because a lot of people use them as well.*
> **Child, Stockholm**

When talking about the type of foods promoted through special offers, it was mostly ultra-processed foods that were mentioned, such as sugary drinks, crisps, cinnamon buns, and ice cream.

> *Yes, because there are special offers, you might crave a bag of crisps sometimes, and then if it's 2 for 49 kr, or whatever it is, then you buy two instead of one, in order to save.*
> **Child, Gävle**

Some of the pupils also talked about mobile apps from major fast food chains that allow people to collect points and buy food at cheaper prices. The pupils found that this could influence their food choices.

> *Like, what I think many would have chosen, are these like fast food restaurants like McDonalds and such. Since, if you think about it, as an example, they have an app called the McDonalds app, and you can collect points and stuff, and it is cheaper. They also have a larger variety of products. You can buy like different things for a certain price that's not so, like high.*
> **Child, Stockholm**

It should be noted that even if the pupils generally viewed special offers as something positive, giving them the impression that they would save money, or get "more for less", some of them recognised that such offers could also negatively impact people's health.

> *"It is bad with this, all this advertisement for unhealthy food, sweets, energy drinks and so on. And it´s always in your face. It is more advertisement for unhealthy foods that you see all the time and gets affected by. Like this campaign with half price on ice cream. It was everywhere, everyone had seen it. It was in media, everywhere. And it was that everyone was buying ice cream all the time. It was, yeah."*
> **Child, Stockholm**

2.5.3. Children prefer ultra-processed foods

The focus group discussions revealed that the pupils had a strong preference for ultra-processed foods and beverages. When asked to choose where they would prefer to eat their lunch on school days (if they were to choose something other than the regular school lunch), the first choice for most of the pupils was ultra-processed fast foods from major fast food chains and restaurants (i.e., hamburgers, fried chicken, pizza, or kebab restaurants). They said that they often ate at fast food outlets, with the reported frequency varying from several times a week to 1–2 times per month.

The pupils also singled out situations when they thought that they were more likely to choose fast foods, including:

- After sports practise
- When they were tired (i.e., didn't want to have to make food at home)
- When they were socialising with friends.

> *In the evening after sports practice, it's nice to have Max (Swedish fast food chain). On weekends if you're having like, yes, not guests, but like friends, then you might go to the pizzeria and buy a pizza kind of.*
> **Child, Gävle**

It was also common for the pupils to buy other ultra-processed foods such as sugary drinks or sweets in supermarkets or convenience stores near their schools during school breaks, or just after finishing school (usually during the afternoon). Sugary drinks such as sodas and fruit drinks were particularly popular. The reported reasons for these purchases included thirst, hunger due to skipping breakfast, or not liking the school lunch that day. Other reported reasons were tiredness or low blood sugar, stress, or just craving something sweet. The pupils stated that such purchases were often made together with friends and were likely to occur several times a week.

> *Like in Tempo (local supermarket) then it´s mostly because you are craving something sweet. And then if there has not been a good lunch and you're hungry, then you'll still want to have something in your tummy. So you go and buy some sweets.*
> **Child, Gävle**

> *Like, when I go, I 100 % buy a drink, and maybe something to eat, like a doughnut, if I want some more sugar.*
> **Child, Stockholm**

On the other hand, despite their strong preference for fast food and sweets, some of the pupils said that they strive to avoid eating fast food too often, since they realise that these types of food are bad for their health.

2.5.4. Healthy foods such as fruits and vegetables are available but not very interesting

Topics about the availability and desirability of healthy food, such as fruits and vegetables, were also discussed. In general, the pupils stated that they had sufficient access to fruits and vegetables. They stated that such foods were available in their homes, in stores, and that vegetables formed part of their school lunch. However, many of the pupils said that they didn't like the vegetables offered at school, meaning they sometimes didn't eat vegetables as part of their school (note: in Sweden, school lunches are often in the form of a buffet).

> *I think it's like easy in stores and at home. I always have vegetables, like, at home and there's are always like vegetables in the food store and stuff. So I think it's really easy to get them.*
> **Child, Stockholm**

Most pupils stated that they often eat fruits and vegetables for lunch and/or dinner. Several pupils also said that they like eating them, particularly fruits. Other pupils claimed that they eat fruits and vegetables because they are healthy or because their parents think it's important, even if they don't personally like them.

No, but I eat vegetables every day for dinner at least, sometimes for lunch. But I try to eat them every day for dinner. My mother thinks that we should do that. She tries to force me even if I don´t want to sometimes, because they're healthy. But sometimes you're in the mood for some tomatoes or carrots, then it's nice to have that for dinner.
Child, Gävle

The pupils almost unanimously agreed that their parents were responsible for purchasing fruits and vegetables. This was regarded as normal as the pupils did not feel that they were responsible for purchasing fruits and vegetables with their own money. Overall, the pupils had little notion of the price of fruits and vegetables and most of them said it was unlikely that they would go to the store and buy such foods themselves. However, if fruits were readily available at home, they said that they might grab one when they wanted something to eat.

In short, if the pupils had to buy something using their own money, they would rather buy ultra-processed foods such as fast food or unhealthy snacks.

– It's them who buys (parents). If it was my money, I would buy something tastier, I mean some tastier food. I mean fruits are good, but I mean some food that makes me, like happier or something.
Interviewer: And what would that be?
– McDonalds.
Child, Stockholm

– No, but I don't buy that kind of stuff (fruits and vegetables) because my parents buy it all the time.
Interviewer: They buy it instead?
- Yeah, it´s not my responsibility. I only buy snacks.
Child, Gävle

2.5.5. Children's suggestions for how the food environment could be improved

We also asked the pupils if there was anything they would want to change about their food environment and how the environment could be changed to facilitate healthier food consumption. Some of the pupils said that they were happy with their food environment and that nothing needed to be changed. Other pupils believed that nothing could be done to increase their fruit and vegetable intake.

Apart from that, an important topic regarding improvements of their food environment was the school lunch in general, often focusing on the type and quality of the vegetables that were offered. The pupils wanted to have access to more vegetables that they routinely like to eat, such as cucumber, sweetcorn and carrots, tomato, and bell pepper. Instead, they complained that it was often the case that only "grown-up vegetables" were available, such as beans, root vegetables and olives. Additionally, some of the pupils stated that they were not fans of chopped vegetable mixed together, since such mixes often contained certain vegetables that they didn't like. They therefore chose not to eat any of it.

Yes, but instead of "grown-up" vegetables you could have children's vegetables that people at least like, such as tomatoes and bell pepper.
Child, Gävle

Several pupils suggested a change in the prices of certain foods in order to influence people's choices when shopping. Some of the pupils also stated that that they did not usually buy foods that were too expensive, including unhealthy snacks.

Candy should be, like, everything that has a lot of sugar in it should be much more expensive and then like healthy stuff should, be a bit cheaper. Because there are people that die from, like, too much unhealthy food and stuff, so like you could eat healthy food instead. Then there are kids and such who gets holes in their teeth from sugar. So, it would be better if sweets were more expensive.
Child, Stockholm

There are two different options here which you could choose between. Either you stop, you reduce the amount of buns and this kind of unhealthy stuff, or you remove these discounts, so that people are simply not tempted as easily. Or like, you create, you do the same thing, but with fruits.
Child, Stockholm

But maybe on the unhealthy you could raise the price instead of lowering it, if they want us to eat healthier. They could raise the prises on those gods (unhealthy) and like lower it on the healthy and raise on the unhealthy.
Child, Stockholm

Regarding the depiction of food in advertisements, several pupils pointed out that advertisements often portray food that looks better than it does in reality in order to make the food seem more attractive to the customers. The pupils thought that this was dishonest and wanted the food portrayed in advertisements to be closer to reality.

– One thing that I've noticed, I think some others have noticed it as well, is that food looks better in the pictures than it does in reality sort of, and I think they (i.e., food companies) do that just to – what's it called?
– Attract customers
– Exactly, attract them.
Childs discussing, Stockholm

The illustration shows where and how children can be exposed to food advertisements in their everyday lives.

2.6. DISCUSSION AND CONCLUSIONS

2.6.1. The dominance of food advertisements for ultra-processed foods

The report's main findings raise strong concerns about the food environment which children (and adults) in Sweden are exposed to. Approximately 80% of all outdoor food advertisements in the analysed areas promoted ultra-processed foods. This observation is in line with previous research from Sweden (63). The high proportion of advertisements for ultra-processed foods is most likely a contributing factor to the significant increase in the consumption of ultra-processed foods by the Swedish population in recent decades (76).

It is of concern that the results of the mapping, specifically in places in which children spend time, indicate that food advertisements are clearly dominated by ultra-processed food, regardless of the socio-demographic characteristics of the area (such as larger or smaller city, higher or lower SES), particularly when previous research has shown differences between areas with different levels of SES (63). This suggests that advertisements for unhealthy foods are a systemic problem in Sweden. This, in turn, suggests that legislative changes are needed in order to regulate outdoor food advertising throughout the country, rather than in specific areas.

The absence of differences across the analysed areas may be explained by the child-centric approach used in this project. The areas documented were selected based on where the pupils spend time, rather than where the project team thought the pupils spent time. Previous research that has shown differences between areas with different levels of SES have lacked such a methodological approach (63). In other words, the differences in exposure to food advertising between areas based on their socio-economic characteristics, as described previously, may still exist (63).

The dominance of outdoor advertisements for ultra-processed food is also in line with what has been documented in several other countries. For example, 70% of all food advertisements near secondary schools in New Zealand advertised "junk food"(41), 90% of all food advertisements near 25 primary and secondary schools in Vancouver, Canada contained "food not recommended by the school's dietary guidelines" (50) and 74% of food advertisements near primary and secondary schools in Perth and 75% in Sydney, Australia advertised "non-core" foods (77, 78).

The proportion of advertisements for unhealthy foods has not been below 55% in any study performed in the field of outdoor food advertising so far (79). Such consistency across studies from different countries strongly suggests that the dominance of advertisements for ultra-processed foods must be taken seriously by policy makers. This is particularly relevant when the number of people in the world living with obesity would appear to be increasing exponentially.

Even the pupils who participated in the project noted the overwhelming prevalence of advertisements for ultra-processed foods. It is therefore not surprising that the pupils preferred these types of foods and beverages. A high self-reported consumption of ultra-processed foods is also not surprising, as current evidence suggests that food advertisements have a formative effect on children's preferences, food choices and purchasing patterns (80), and it has been shown that children generally eat this type of food to a large extent (81).

Key issues identified in this report?

- Swedish children's food environment is dominated by advertisements for ultra-processed food products (i.e., 4 out of 5 food advertisements).
- Discounts for ultra-processed food products are abundant in the current food environment (4 out of 5 food products) and children are very sensitive to such discounts.
- The children themselves say that the food advertisements around them affect their food choices and that they are responsive to discounts on ultra-processed food products.
- Policy actions by Swedish politicians are needed to better protect children from poor dietary habits encouraged by food advertisements.

2.6.2. Outdoor food advertisements in Sweden and their relationship to national dietary guidelines

The type of dietary patterns promoted by the current food advertising landscape in Sweden is contrary to the dietary advice from the National Food Agency, which is based on a comprehensive review of the scientific literature in the field (82). Instead, the food advertising landscape is dominated by ultra-processed food promotions, which can be associated with an imbalance of energy since this could contribute to excessive energy intake. This, in turn, could result in weight gain and development of obesity (35). Ultra-processed foods also contain large amounts of added sugar, found in foods such as sugar-sweetened beverages, sweets, pastries, and ice cream, which is contrary to the advice about reducing the sugar intake.

Similarly, the high salt content of ultra-processed foods is contrary to the recommendation to eat less salt. Processed red meat also features in food advertisements for ultra-processed foods (e.g., advertisements for fast foods such as hamburgers, kebabs, hot dogs, etc.). This is contrary to the Swedish Food Agency's recommendation to eat less red and processed meat. Finally, a diet rich in ultra-processed food is often low in foods recommended by the Swedish Food Agency to promote good health, such as fruits, vegetables, berries, whole grain products, fish, and seafood.

It can be argued that the food advertising landscape surrounding children in Sweden resembles an inverted food pyramid, spreading messages and encouraging food choices that are contrary to the national dietary recommendations of the Swedish Food Agency. In other words, the Swedish food environment seem to encourage children to eat and drink more ultra-processed foods, such as soft drinks and fast foods, instead of the foods recommended by dietary guidelines (see figure below for a simplified graphic illustration of this).

The pyramid on the left shows a simplified version of the proportion of outdoor advertising that surrounded the pupils in the project. The pyramid on the right shows a simplified version of what the proportions should like in order to promote the dietary advice issued by the Swedish Food Agency: Dietary advice – "Find your way" (74). The images inside the red lines represent advertisements for ultra-processed foods, which we should eat less of, while the images inside the green lines represent advertisements for vegetables, fruit and berries, whole-grain products, fish and/or seafood, low-fat dairy products, and products with healthy fats, which we should eat more of. All included images were collected during the project.

2.6.3. The problem with special offers for ultra-processed foods

An additional problem identified in this report was the high prevalence of special offers for food. As many as one in four documented food advertisements included discounts or ”buy 3 pay for 2” type offers. These types of sale strategies have been associated with ”impulse purchases” and could therefore result in the overconsumption of foods (83).

Unsurprisingly, 74% of all special offers advertised ultra-processed foods such as energy drinks, sugar-sweetened beverages, sweets, and ice cream. Thus, there needs to be more focus on these types of special offers in future legislation and research on food advertising.

Interestingly, the pupils themselves stated that they were strongly influenced by these types of special offers for food and felt that they led to increased consumption of ultra-processed foods. This observation is in line with other recent research in this field (31, 83) and confirms the effectiveness of this type of marketing strategy towards children.

Examples of special offers for food from the current project.

2.6.4. Future research needs

More research on children’s exposure to food advertisements is needed to evaluate the effectiveness (i.e., monitor the outcomes) of potential measures aimed at reducing children’s exposure to advertisements for ultra-processed food. The methodology used in this project could also be included in larger scale studies that include more cities and areas beyond those included in the current project. It is also important to investigate other contexts in which children are regularly exposed to food advertising.

Examples include:

- Social media platforms
- Digital media platforms, such as mobile apps for fast food outlets
- Music streaming services
- Other online media

These media channels are growing and evolving fast, leading to major technological challenges when it comes to analysing advertisements. For example, in live-streamed content, research that uses new innovative methods to better monitor and evaluate children’s exposure to ultra-processed food is needed. This type of research should also examine how the implementation of regulatory changes can be optimised to maximise the positive effects on children’s eating habits.

PART 3 Children's right to nutritious food and health

3.1. CONVENTION ON THE RIGHTS OF THE CHILD

The Convention on the Rights of the Child is an international and legally binding agreement that states that children are individuals with their own rights, and not just the property of their parents or other adults. Since its adoption, the Convention on the Rights of the Child has become the most widely ratified convention in the world and has helped to change the view of children.

Governments that have signed the Convention on the Rights of the Child have the duty to respect, protect and fulfil the rights of the child as set out in its articles. This includes taking all appropriate legislative and administrative measures to implement these rights (Article 4). It also means an obligation to refrain from decisions and measures that violate or prevent the fulfilment of the rights of the child. This includes a responsibility to protect children from harmful activities by third parties and companies.

One of the fundamental principles of the Convention on the Rights of the Child is that the best interests of the child should be of primary consideration in all decisions concerning children. This should be the guiding principle for states and public authorities when considering legislations or decisions affecting children (Article 3).

What is the definition of a child?

According to the United Nations Convention on the Rights of the Child Act (2018:1197), a child is any person under 18 years of age.

According to the Convention on the Rights of the Child, childhood is an important and unique period of life. Children up to 18 years of age must have the opportunity to grow, learn, play, and develop with dignity.

healthy life is a prerequisite

A healthy life is a prerequisite for children to develop in the best possible way, both mentally and physically, and to reach their full potential. Children do not choose their dietary habits. They are dependent on adults to provide them with nutritious and healthy food. Thus, children need to be protected from any adverse effects on their development and must have access to food that is nutritious and beneficial for their health. And as adults, it is our responsibility to ensure this.

Unfortunately, many children currently lack access to nutritious food. Globally, one in three children under the age of five do not receive the nutrients they need, and face either malnutrition or obesity. Globally, half of children under the age of five live with "hidden hunger", where they do not get the vitamins or essential nutrients they need. The reality is that the world's children consume too little of what is good for them and consume too much of what they don't need (UNICEF report The State of the World's Children 2019). Increasing inequalities, both in Sweden and globally, are also a contributing factor to this development.

Children's right to safe and nutritious food

In addition to combating malnutrition, according to the general comments of the Convention on the Rights of the Child, governments should also work to reduce the prevalence of overweight and obesity in children and young people. Specifically, children's exposure to so-called fast food should be limited. This type of food contains high levels of fat, sugar, and salt, while often being both high in energy and low in nutrients. The marketing of such products, particularly those aimed at children, should be regulated, as should their availability in schools and other places in which children and young people often spend time (The Convention on the Rights of the Child, General Comment no. 15).

Under the Convention on the Rights of the Child, the state has an obligation to ensure that businesses do not negatively impact the rights and well-being of children. Also, the promotion of foods that are high in saturated fats, trans fats, sugar, salt, or additives is described as something that may affect a child's health in the long-term (Convention on the Rights of the Child, General Comment no. 16).

The Convention on the Rights of the Child in Sweden

Sweden was one of the first countries in the world to sign the Convention on the Rights of the Child. Since 2020, the Convention on the Rights of the Child has also been incorporated into Swedish law. This in itself, does not give children any new rights. However, consideration for children's rights now carries the same legal status as other national laws in Sweden. This also means an increased and more explicit obligation for the government, authorities, and courts to consider the child's best in decisions and considerations that affect children (84).

Beyond strengthening the position of children's rights in various considerations, this also influences how we view children's rights. There are now even stronger demands on public authorities and courts to apply the Convention in practice and involve children in the decisions that affect them. This also applies to decisions at a local and regional level, where many of the decisions affecting children's food environment are taken.

Child Rights and Business Principles

The Children's Rights and Business Principles are ten principles that were developed by UNICEF, the UN Global Compact and Save the Children in 2012. They were created to guide and help companies that want to integrate children's rights into their operations. The principles offer concrete guidance on how companies should go about fulfilling their responsibilities under international standards to respect and strengthen the rights of the child: in the workplace, in the marketplace and in society (85).

The fundamental principles of children's rights state that all businesses should respect and work to support children's rights. The principles specifically mention responsible marketing, in which it is recommended that companies market their products and services in a way that does not adversely affect children's rights. It encourages marketing that strengthens children's rights, such as promoting a positive self-image and a healthy lifestyle (Principles 1 and 6).

The Principles build on existing international standards and initiatives related to children's rights and sustainable business. They are not binding or mandatory but have gained widespread recognition and consensus among business and organisations and define businesses' responsibilities towards the children and young people that they affect.

3.2. SWEDEN'S IMPLEMENTATION OF THE 2030 AGENDA AND THE SUSTAINABLE DEVELOPMENT GOALS

In 2015, the countries of the world agreed on 17 Sustainable Development Goals and 169 targets to be reached by 2030. In addition, the Action Plan for the 2030 Agenda came into force in 2016. For each goal of the Agenda, states and governments have committed to developing ambitious national measures. In the National Action Plan for the 2030 Agenda, the direction of the work in Sweden towards implementation of the 2030 Agenda has been defined. In order to ensure the work and progress towards achieving the global goals, clear evaluation indicators and milestones are required. How and what each country should report to the UN is determined by both global and country-specific indicators.

Goal 2 – Zero hunger

Goal 2.2 relates to the eradication of underweight and overweight in children under the age of five. Sweden has concluded that the indicator for malnutrition is not relevant for Sweden. Instead, it is the prevalence of overweight and obesity that is of relevance in the national context. In Sweden, the National Board of Health and Welfare is responsible for sub-goal 2.2 (indicator 2.2.2.). Currently, this is only measured at a regional level. It is the regions that are responsible for organising child health care and for the children registered with them. Each region's child health centre has data on overweight and obesity, but these data are not reported or compiled nationally.

Goal 3 – Good health and well-being

By 2030, sub-goal 3.4 aims to reduce the mortality from non-communicable diseases by one-third through prevention and treatment and to promote mental health and well-being. Unhealthy dietary habits reduce the chances of achieving good health, as they are associated with multiple health risks, as well as the development of mental illness.

Goal 17 – Partnership for the goals

Achieving the Global Goals requires strong and broad partnerships between governments, the private sector and civil society. Collaboration at global, national, and local levels, based on shared values, is a prerequisite to strengthening the work towards sustainable development.

3.3. REGULATIONS ON MARKETING TO CHILDREN IN SWEDEN

In Sweden, marketing is regulated by the Marketing Act (2008:486). In addition, there are a number of acts that regulate marketing in specific domains, such as the Radio and TV Act (2010:696), the Alcohol Act (2010:580) and the Act on Tobacco and Similar Products (2018:2088). There are also EU directives that impose requirements on advertising and its design (86). According to the Marketing Act, there is no general ban on advertising that is targeted at children (88). However, it is not permitted to send direct advertising to children under the age of 16 years, by whatever means. Direct advertising is when an advertisement is addressed to a specific person. It is also not permitted to directly encourage children under the age of 18 years to buy, or to persuade their parents or other adults, to buy the advertised products for them (89). Regardless of the target group, marketing must always comply with good marketing practice. According to the Radio and TV Act, it is forbidden to target advertising on television at children under the age of 12 years (87). Advertising on television must not appear immediately before, during or after programmes which are targeted at children under the age of 12 years, intend to attract the attention of children under the age of 12 years, or depict characters from children's programmes. Product placement is also prohibited in programmes targeted at children under the age of 12 years. Since 2020, the act also applies to web TV and video sharing platforms. However, it does not apply to TV channels broadcasting from countries outside Sweden.

In addition to these acts, the International Chamber of Commerce (ICC) has developed rules for advertising and marketing communications that serve as an instrument for self-regulation by

the industry (90). According to the rules, ”special care shall be taken” when marketing communications are directed at, or portray children or young people, and such communications must not discourage positive social behaviours, attitudes, and lifestyles. Specific guidelines have also been developed for the responsible marketing of food and beverages (91). Advertising that violates the guidelines can be reported to the Swedish Advertising authority (ombudsman), which is part of the industry's self-regulation.

3.4. HOW WELL DOES THE CURRENT REGULATORY FRAMEWORK CATER FOR CHILDREN AND YOUNG PEOPLE'S RIGHT TO NUTRITION AND HEALTH UNDER THE CONVENTION ON THE RIGHTS OF THE CHILD?

This project clearly shows that the food environment, including the advertising and pricing of products, play a crucial role in children's and young people's food preferences and intake. Based on the results of the project, it can be concluded that the food environment of children in Sweden, particularly the food advertising landscape, makes it difficult for them to make healthy food choices. This impacts their right to nutrition, development, and the highest attainable standard of health according to the Convention on the Rights of the Child. In light of the pupil's own pictures and accounts, it appears that the current regulatory framework does not sufficiently protect all children from the negative impact of advertisements for ultra-processed food. The food advertisements in the children's immediate environment and what they are encouraged to buy are contrary to what scientific literature has shown is healthy for them to eat. This cannot be regarded as something that reinforces Sweden's vision of healthier eating habits among children and adolescents. This also suggests that commercial interests currently outweigh the consideration of children's right to nutrition and the best attainable health.

We believe that that the current legislation in Sweden does not sufficiently reflect the best interests of the child and children's rights to healthy food. The government has incorporated the Convention on the Rights of the Child into Swedish law and therefore has an obligation to ensure that the best interests of the child are considered a priority in all matters concerning children. Furthermore, the government should take all necessary measures to ensure that children's rights are respected, protected, and fulfilled. This also applies to decisions and considerations taken at a municipal and regional level.

The current regulatory framework and guidelines regarding food and beverage marketing – be it mandatory or voluntary – do not adequately protect children from the harmful effects of unhealthy food environments. Thus, the children's rights perspective needs to be strengthened in this area. Swedish Consumer Agency guidelines on marketing to children and young people state that advertising needs to consider those individuals who are actually affected and not only those individuals who are targeted by the marketing. From the pictures taken by the pupils in their immediate environment and from their own accounts describing how they are affected by advertising (both online and offline), it is clear that they are exposed to a significant amount of food advertising for products that are not considered part of a healthy diet.

The pupils also report that various promotional practices, particularly in the form of quantity purchases, are attractive and hard to resist. Thus, it is clear that a lot of food advertising, although not directed at children, has a major impact on the preferences and purchasing behaviours of children and young people.

3.5. REVERSE THE TREND AND CREATE FOOD ENVIRONMENTS THAT ARE GOOD FOR CHILDREN

The food that is marketed today, which primarily comprises unhealthy ultra-processed foods, limits the ability of children and families to access healthier options. The current food marketing also contributes to increased public health challenges and societal costs. This needs to change. It is time to strengthen the children's rights perspective in conversations about public health and dietary habits. It is time to put children's rights to nutritious food and health at the

centre of every conversation about public health policies and diets. It is also time to shift the public narrative from a predominantly individual responsibility of children and their parents to make healthy food choices, towards generating demand for policies that support a health-enabling food environment in which children spend time, eat, play, and interact. This includes measures that address the external barriers that form children's social norms and preferences, which also obstruct existing efforts to improve young people's diets. The results of this project show that children and young people are exposed to similar advertising landscapes regardless of area, the nature of the neighbourhood and the local socio-economic characteristics, despite that fact that health outcomes differ in these areas. Thus, measures that protect all children, irrespective of their individual ability to eat healthy food, should be directed at the food environment. This is now more important than ever. In the current economic crisis, with the rising cost of living and increasing inequality, we must ensure that food that is most accessible, attractive, and affordable for children and families is also good for their health.

Collaboration is a key factor

This is a systemic issue that requires broad societal action. Thus, measures are required across sectors and domains. However, it is the decision-makers in Sweden who must be the driving force in designing, implementing, and enforcing regulations that ensure a healthy food environment for all children and young people. Also, more companies need to integrate the children's rights perspective into all aspects of their operations. To fulfil their responsibilities under the children's rights principles, companies need to better understand how their activities and marketing affect children and young people, both directly and indirectly. Industry and business are currently engaged in positive initiatives that promote healthier consumption, from reducing sugar and salt in their products to "nudging" the purchase of fruit and vegetables. However, they need to do more. In addition to measures aimed at minimising negative impacts, they can also contribute positively to children's eating habits, for example, by making the most accessible affordable and attractive food for children, which is also good for their health.

Giving children information and influence

According to Article 12 of the Convention on the Rights of the Child, children and young people have the right to make their voices heard and to be involved in all matters that concern them. To this end, adults are responsible for giving children the opportunity and space to express themselves – and to listen to them. Thus, the participation of children and young people need to be prioritised by all parties who want to work to improve their diets and their food environment. To ensure that the appropriate measures are implemented, children and young people need to be systematically included, so that they can describe their experiences and contribute to change. Children and young people also need to be involved in the development of new solutions that contribute to better eating habits. From the discussions with young people in this report, it is also clear that they need to be provided with more knowledge about how they are influenced by their food environment, not least by food marketing. Information should be provided in a way that young people can understand, enabling them to make more informed decisions. Together with children and young people, we can create a food environment that reflects our joint vision are responsible for giving to nutritious and healthy food, and a food environment that reinforces the national public health agenda and contributes to the global goals.

PART 4 Recommendations of UNICEF Sweden and the Heart Lung Foundation.

To achieve our common goal, we must involve children and young people, integrate children's rights into existing processes, and invest in the health of children and young people.

WE URGE THE GOVERNMENT AND AUTHORITIES TO:

- **Develop national targets and an action plan to prevent and reduce the prevalence of obesity in children and young people, in which one of the action areas is to create health-enabling environments for children that uphold their right to nutritious food in the places where they live, eat, play, and interact.**
- **Investigate and propose measures and instruments that protect children from the exposure to and influence of the marketing of unhealthy foods and beverages, which may include:**
  - Strengthening regulations regarding advertising in public spaces and food environments near schools and/or other "hotspots" where children often meet.
  - Redirecting certain marketing techniques, such as multi-purchase special offers that encourages consumption of unhealthy food and beverages, and instead provide families with more accessible and attractive choices that are both cost effective and good for their health.
  - Strengthening regulations regarding the online marketing of unhealthy foods.
  - Listening to, involving and empowering children and young people to better understand their food environment and what influences their preferences and eating habits, in order to determine the most effective interventions.
  - Providing children and young people with age-appropriate information and knowledge about how their food environment influences them, in order to enable them to make more conscious and informed choices.

WE URGE BUSINESS AND INDUSTRY TO:

- **Integrate children's rights into their daily operations by implementing children's rights and business principles:**
  - Conduct impact assessments of their activities and products in order to understand their impact on children and young people.
  - Adopt policies and implement measures that reduce adverse impacts on children and young people's health and eating habits.
  - Set internal and external targets to promote better eating habits in children and young people and communicate the results.
  - Change from the existing incentives that drive children towards unhealthy eating habits to incentives that encourage children to adopt eating habits that are better for their health.
  - Collaborate with external stakeholders and involve children and young people in order to identify innovative solutions that promote healthy food and better eating habits.

WE ENCOURAGE THE RESEARCH COMMUNITY AND RESEARCH FUNDERS TO:

- **Invest more in research and new methods, such as through user-generated data, to better understand children and young people's exposure to unhealthy foods and to identify solutions to better protect them from negative effects of such exposure.**
- **Explore and identify innovative ways of promoting better eating habits, such as socio- behavioural changes that are integrated into children's daily lives and/or their food environment.**

Appendix

INTERNATIONAL REPORTS AND GUIDELINES WITH A FOCUS ON OBESITY AND NON-COMMUNICABLE DISEASES

In addition to the material in this report, several documents have been produced on a global level over the years that include goals and recommended actions to reduce the prevalence of obesity and non-communicable diseases. Key examples are the documents produced by the World Health Organisation (WHO), the United Nations (UN) and UNICEF (see table for selected examples). Several of these reports highlight restrictions on the marketing of unhealthy food and beverages to children as an important tool to reduce the national and global prevalence of obesity.

NAME OF DOCUMENT	RELEVANT TARGETS
UN 2030 Agenda and the Sustainable Development Goals (SDGs) (68)	Target 2.2. End all forms of malnutrition. Target 3.4. Reduce by one-third mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.
WHO Global action plan for the Prevention and Control of NCDs 2013-2020 [92]	Targets to be reached by 2025 with a baseline at 2010 levels: – A 25% relative reduction in premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases. – Halt the rise in diabetes and obesity.
WHO Global Strategy on Diet, Physical Activity, and health [93]	Main objective 1. To reduce the risk factors for NCDs that stem from unhealthy diets and physical inactivity by means of essential public health action and health-promoting and disease-preventing measures. Main objective 3. To encourage the development, strengthening and implementation of global, regional, national and community policies and action plans to improve diets and increase physical activity that are sustainable, comprehensive, and actively engage all sectors, including civil society, the private sector, and the media.
WHO Global targets 2025: To improve maternal, infant, and young child nutrition [94]	Ensure that there is no increase in childhood overweight.
The Second International Conference on Nutrition (ICN2) [95]	Reverse the trend in obesity and diet related NCDs. Sustainably improve nutrition by providing people with year-round access to food that meets their nutrition needs and promotes safe, diversified, healthy diets.
UN Decade of Action on Nutrition 2016-2025 [96]	Purpose: accelerate the implementation of ICN2, achieve global targets on nutrition and NCDs and contribute to achievement of the SDGs. Action area 2. Safe and supportive environments for nutrition at all ages.
NAME OF DOCUMENT	**RECOMMENDED ACTIONS**
WHO Commission on Ending Childhood Obesity [72]	Recommendation 1. Implement comprehensive programmes that promote the intake of healthy foods and reduce the intake of unhealthy food and sugar-sweetened beverages by children and adolescents.
WHO Set of recommended actions on the marketing of foods and non-alcoholic beverages to children [80]	Recommendation 1-12. For example: – Recommendation 1. Develop policies with the aim to reduce the impact on children of marketing of foods high in saturated fats, trans-fatty acids, free sugars, or salt. – Recommendation 2. Given that the effectiveness of marketing is a function of exposure and power, the overall policy objective should be to reduce both the exposure of children to, and power of, marketing of foods high in salt, saturated fats, trans-fatty acids, free sugars, or salt.
WHO Best buys and other recommended interventions for the prevention and control of NCDs [98]	Implement the Global Strategy on Diet, Physical Activity and Health. Implement the WHO Set of Recommendations on the Marketing of Foods and Non-alcoholic Beverages to Children.
UNICEF: Prevention of Overweight and Obesity in Children and Adolescents [99]	6.1 Improve the enabling environment: Policies, regulatory frameworks, and strategies e.g.: – Implementation of the WHO Set of Recommendations on the Marketing of Foods and Non-alcoholic Beverages to Children.
EU Action Plan on Childhood Obesity 2014-2020 [100]	2.3.4 Restrict marketing and advertising to children.

Examples of documents that address obesity and non-communicable diseases.

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