

# Public acceptability of policies to address obesity

Findings from a mixed-methods study on the island of Ireland



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**Note:**

The research team conducting this project fully support the use of person-first language when discussing obesity and we have tried to reflect this throughout the report. We have however, retained verbatim quotes and comments from participants within the research on the topic of obesity which may not reflect person-first language, and this does not represent our views.

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# Foreword

Obesity is a major public health issue on the island of Ireland. Cross-departmental obesity implementation plans have been developed by the Departments of Health in both Ireland and Northern Ireland, using a range of policy approaches. In Northern Ireland, “A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012–2022” was developed in 2012 and in Ireland the most recent action plan, “A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”, was launched in 2016. Both policies are wide-ranging in their approaches.

Understanding the public’s attitude to different policy interventions is important, as it provides a key indicator of the potential effectiveness of interventions and readiness of the public for such interventions. The aim of this research project is to determine public support for a range of policies, including fiscal (taxes and subsidies) and non-fiscal, and interventions to address obesity on the island of Ireland in a nationally representative sample in Ireland and Northern Ireland to support obesity policy implementation plans in both jurisdictions.

This research builds on the last surveys conducted on the island of Ireland to assess the public’s attitude to interventions, which were carried out in 2013 and 2014. A number of policies and interventions have been implemented since then and it is now timely to investigate public attitudes to obesity interventions again and draw comparisons in public acceptance for policies to address obesity over time.

This report provides an overview of the main findings from a quantitative survey and qualitative focus groups. It also offers recommendations that can inform future policies to reduce the prevalence of people living with obesity on the island of Ireland.

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# Executive summary

## Introduction

- Obesity is a multifactorial disease with environmental, social, psychological and biological factors contributing to its causes and effects.
- Increasing rates of overweight and obesity pose a complex challenge for public health and the economy.
- Ongoing measures in Northern Ireland and Ireland have not fully addressed the challenge that obesity poses. Identifying policies that are supported by the public is key to designing effective strategies to reduce the prevalence of people living with obesity. An additional challenge is the misperceptions associated with obesity, including stereotyping and bias towards those living with obesity.
- This study aimed to utilise a mixed-methods approach to assess the levels of public support for various policies to address obesity on the island of Ireland. Additionally, it aimed to capture public views around obesity.

## Aims and objectives

The aim of this research is to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland. The objectives of the research were to:

- Undertake a review of the published literature regarding public perceptions of the scale of the obesity problem, public views on initiatives to address obesity and public support for policy interventions to address obesity from across the globe.
- Provide a comprehensive “map” outlining the existing policies and wider initiatives to address obesity across the island of Ireland. This will give an overview of what public policies have been implemented in Northern Ireland and Ireland and will explore potential options for future initiatives to address obesity based on what other countries have done. Policies and initiatives covered will be extensive, including fiscal (taxes and subsidies), non-fiscal and interventions across a range of settings such as catering standards and food in hospitals, physical activity

initiatives and food restrictions in schools, and restrictions on the marketing of food to children through a variety of forms of media, social media, gaming channels and so on.

- Consult with members of the public through PPI activities and with other relevant key stakeholders (for example public health agencies and policymakers) to aid the development of the quantitative survey. This activity will serve to “check” views upon topics included, how obesity is portrayed and described, and appropriate and non-stigmatising wording and terminology.
- Conduct a representative, face-to-face cross-sectional survey with adults aged over 18 years across the island of Ireland to determine public perceptions of the scale of the obesity problem, people’s views on the causes and treatment of obesity, the medicalisation of obesity and “obesity as a disease”, and the level of public support for different policy interventions and initiatives to address obesity; and to assess the demographic characteristics that determine support for policies and initiatives across the island of Ireland to address obesity. This survey will be developed using information from the previous survey, conducted in Ireland in 2013 and published in 2014, and other international surveys.
- Explore key aspects emerging from the quantitative survey analysis in depth through a series of focus groups with members of the public to gain insight into the wider context and reasoning for public attitudes towards obesity policies and initiatives.
- Report in detail on the evidence to provide a resource for key stakeholders to formulate strategies for policy interventions and initiatives to address obesity to maximise uptake and acceptability.

## **Methodology**

The focus of the research is on quantitative survey methodology, incorporating personal and public involvement (PPI). Key quantitative findings are supplemented with qualitative research to allow for a detailed exploration of context in the views of the public, something that may be missed by using a quantitative approach alone.

## Literature review methodology

A comprehensive literature review was conducted to provide an understanding of people's perceptions of the scale of the obesity problem globally to contextualise any findings from the island of Ireland; and to provide an understanding of the public's views of policies to address obesity and of the public's support for policy interventions to address obesity. Ultimately, the literature review helped identify which measures to include in the survey.

## Quantitative survey methodology

- A cross-sectional survey employed a quota sampling approach and collected quantitative (that is, directly countable) data from a representative sample of 1,049 adults living on the island of Ireland (722 individuals from Ireland and 327 from Northern Ireland).
- The development of the survey was informed by a previous (2014) **safefood** report, a literature review (that is, a review of relevant published research papers and other articles), a "policy mapping" exercise outlining the existing policies and wider initiatives to address obesity across the island of Ireland, and a personal and public involvement consultation exercise with expert advice on wording and terminology.
- The final survey was extensively pilot tested and, through validated (representative and reliable) scales of measurement, captured information including demographic characteristics, health and wellbeing information, views about obesity, support for obesity-related policies and public perceptions regarding people living with obesity in society.
- Interviews were conducted by telephone between October and December 2020.

## Qualitative focus group methodology

- A total of 9 focus groups were conducted with adults aged 18 to 70 years living in Northern Ireland (4 groups) and Ireland (5 groups) to collect qualitative data (information that is not directly countable, such as emotions and perceptions).
- Participants were allocated to focus groups according to a suitable, pre-planned and agreed sampling matrix based on children living at home, socioeconomic status and urban or rural residency.
- A semi-structured topic guide was developed based on a literature review, an obesity policy "map" and headline survey findings from the quantitative research.



- Focus groups were conducted online through Zoom™ (Zoom Video Conferencing Incorporated, San Jose, California, United States of America) between February and March 2021.

## Literature review results

- The global obesity context is provided to setting the scene and providing an overview of the problem.
- Next, the island of Ireland context is explored, providing evidence on the growing problem in both NI and ROI and associated costs.
- Briefly, factors associated with obesity are discussed, after which the evidence on the public perceptions of the causes of obesity are summarized.
- Furthermore, obesity policies and their effects on public health are explored, and the complexity of policymaking
- Finally, factors that affect health policy and obesity policy support among the public are summarised.

## Survey results

- Survey respondents provided responses on 37 obesity-related policies, which were divided into 4 distinct groups:
  - Child-focussed policies: This group gathers all child-related measures, including banning vending machines in schools and regulation of the nutritional content of school meals.
  - Informational interventions: All informational and promotional measures aimed at the general population (that is, not child-focussed) are brought together in this group, including information campaigns, education and training measures and food labelling policies.
  - Fiscal measures: This group brings together taxes on unhealthy foods, VAT measures and subsidies for healthy foods.
  - Industry regulation measures: This group gathers regulatory measures relating to businesses, such as restrictions on portion size in restaurants, health insurance price reductions for normal weight individuals and banning special offers on high-sugar and high-fat foods.

- Findings showed high levels of public support for obesity-related policy interventions except in relation to additional health charges for those presenting with obesity, and restriction of restaurant portion sizes.
- Child-focussed policies were most popular with the public.
- Socio-economic and demographic factors such as gender, age and education impacted on the level of support.
- When comparing current findings for Ireland to those captured in 2014, few, but significant changes in policy support were evident (no data was reported for Northern Ireland in 2014 so no comparisons can be drawn).
- People understand the consequences of obesity for health and understand that the food environment contributes to this. However, they also attribute personal responsibility for weight status.
- Losing weight was regarded to greatly improve the health of people living with obesity. Individuals living with a healthy body weight were seen to lead a more active life compared with those living with overweight or obesity.
- A third of respondents currently living with excess weight reported experiences of weight-related discrimination.
- People living with obesity were perceived to have the same right as everyone else to receive treatment in the health system.

### **Focus group results**

- Focus group participants discussed key survey findings from the quantitative research and voiced their views regarding them, alongside considering the factors that might have influenced survey responses.
- Concern over rising rates of obesity sparked support for initiatives focussed on schools, the cost of food, food environment and store architecture (lighting, layout, in-store promotion and so on), as well as education around obesity and nutrition.
- General disagreement was expressed for health insurance price reductions for people living with a healthy weight.
- The impact of COVID-19 on health and wellbeing was discussed at length, highlighting a range of both positive and negative influences on health-related behaviour.

- Focus group discussions facilitated the sharing of personal or retold experiences of weight-based discrimination and included some suggestions to address this, in spite of some confusion as to what constitutes (what defines) “weight-based discrimination” and “weight stigma” (a term referring to social stereotypes and misconceptions about obesity).

## Conclusions

This research highlights that public support for many obesity policies is high across the island of Ireland; however, the multifactorial nature of obesity presents significant challenges for policymakers. Furthermore, the “socioeconomic gradient” associated with obesity is of note within this research, with at least 1 in 5 respondents reporting that they find it “Difficult” or “Very difficult” to cope financially. (The social or socioeconomic gradient is a term that describes the case that socially and economically disadvantaged people have worse health and shorter lives than those who are more advantaged.) Challenges relating to socioeconomic grouping (including income and educational attainment) are inextricably linked to health-promoting or health-impairing behaviours and this is borne out in key findings here, such as those with a higher level of education being more supportive of educational policies focussing on children and schools and on restricting fast food. Barriers such as income and food cost and availability need to be addressed as part of a wider response to tackling obesity.

Findings of this mixed-methods study indicate high levels of public awareness of the rising rates of obesity and its effect on health, including during the period of COVID-19 pandemic. The public are likely to endorse the introduction of most obesity-related policies, with a particular focus on those that target children. However, medical and health insurance charges based on individuals’ weight status are not well supported. Comparison with previous evidence shows that public acceptability of obesity interventions has generally remained consistent through the years (since the publication of the 2014 report by *safefood*). Finally, even though there is awareness that weight stigma and weight-based discrimination are prevalent in society, there is confusion over what constitutes these.

This research work was conducted amidst the context of COVID-19 pandemic. This should be taken into consideration when interpreting some of the differences between 2014 and present findings, making it hard to use any small differences as a basis for theories about

what may happen in the future as COVID-19 may have significantly altered public views surrounding eating and physical activity behaviours. Further research work is required over a number of years to assess trends in views about obesity and policy support and the impact of COVID-19 on these.

## Recommendations

This work reveals broad public support for policies aimed at reducing the prevalence of people living with obesity. Promising policies highlighted in the present exploration are in line with the current initiative in Ireland – “A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025” – and with “A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012–2022” in NI, as well as obesity policies across Europe, such as the “EU Action Plan on Childhood Obesity” (1-3). Recommendations from this body of research include:

### Policy measures

1. Government departments should continue to implement nutrition standards for meals provided in education and healthcare settings; and to develop and implement nutrition standards for other settings.
2. All children and young people should have the opportunity to develop practical food skills and knowledge on healthy eating during their education. This should be supported by the provision of the necessary facilities to support education on eating healthily, learning essential cooking skills and staying physically active in all schools.
3. The marketing of unhealthy foods including digital marketing should be restricted, particularly marketing to children. The development and implementation of further mandatory codes of practice on marketing unhealthy foods for both adults and children should be considered.
4. Policymakers should consider extending fiscal and pricing policies such as the such as the tax on sugar-sweetened drinks.
5. Policy options that were less supported such as reducing portion sizes offered in restaurants, should be coupled with approaches that are supported by consumers e.g. a price reductions to make smaller meal sizes more appealing.
6. The effects of measures implemented should be regularly monitored.

7. Obesity policies should be mapped (including prospectively) using a behavioural science approach to ensure they are feasible, acceptable and potentially effective.
8. Monitor support for current and future policies, as public focus for activities that promote healthy behaviours may change based on a particular social climate or time period (such as the COVID-19 pandemic).

#### Perceptions of obesity

9. Raise public awareness that obesity is a disease that is multifactorial in nature. This should include specific focus on awareness of weight stigma and ways to overcome it.
10. Commit to the use of person first language in all communications related to obesity; ensure that all imagery used in communications is non-stigmatising and not discriminatory.
11. Ensure the experience of people living with obesity is considered and reflected in all aspects of public policy.

# 1 Introduction

A large proportion of the global population is living with obesity, a state of excess weight linked to increased morbidity (the incidence of disease) and mortality (the rate of death) (4). Even though there is a wide variation in obesity rates across countries the rates are generally increasing and this is particularly evident in low- and middle-income countries (5). In relation to lifestyle factors, poor diets that are high in sugar, fat and salt, and low in fruit and vegetables, are among the most important risk factors for obesity (6) and have overtaken tobacco use as the world's leading cause of preventable disease (7). Even though modern lifestyles have a role to play (8, 9), there are multiple complex underlying factors implicated in the development of obesity, including biology, genetics and environmental, social and psychological factors (10-12).

Living with obesity is associated with a 2- to 4-year reduction in life expectancy (13, 14) and has been defined as a “chronic, relapsing disease” by the World Obesity Federation (15). In many European countries excess weight is responsible for up to 13 per cent of deaths (16). The current trends in obesity not only pose an international health challenge but they have a large economic impact, too. For the island of Ireland based on 2009 data, the total cost of overweight and obesity was estimated at €1.64 billion (17). To put these figures into perspective, overweight and obesity combined account for an estimated 2.7 per cent and 2.8 per cent of total health expenditure in Ireland and Northern Ireland respectively.

Overweight and obesity also have social implications. Negative attitudes towards people living with obesity, including stereotyping and bias, have increased alongside the rise in obesity levels (18). “Weight stigma”, a term referring to social stereotypes and misconceptions about obesity, has been recognised in literature (that is, in published research papers and articles) and is reportedly still considered to be a socially acceptable form of bias (19). Both weight bias and stigma can lead to weight-based discrimination, which is when personal biases and social stereotypes about obesity are enacted resulting in unfair and discriminatory treatment of people living with obesity (20).

Incorporating awareness of weight stigma and bias in obesity research is a relatively recent concept. The impact of experiencing weight stigma is thought to be wide-ranging, including engaging in unhealthy eating behaviours as a coping response, as well as growing evidence that it is linked to various other impairments of physical and psychological health (19, 21). The harm to physical health is thought to be caused by the psychological stress that experiences of weight-based discrimination can trigger (19). The direct and indirect effects of weight stigma (for example, behaviours such as avoidance of seeking healthcare) are important considerations for public health, especially considering that these effects appear to be independent of having excess body weight, indicating that it may often be the experience of being stigmatised that causes psychological harm.(21) Research on the topic of weight stigma in Northern Ireland and Ireland has been very limited to date; however, some evidence suggests the presence of weight stigma in certain facets of Irish society (22, 23). It is highly likely that the pervasive weight stigma in society that has been shown to exist elsewhere (19) is also present on the island of Ireland.

The complexity of the issues of obesity, including childhood obesity, warrants the need for a multifaceted and population-based approach that considers social, geographic and cultural parameters (the factors or limits that affect the issue) (3). On the island of Ireland, there are 2 main government-led initiatives in place to reduce the prevalence of people living with overweight and obesity. In Northern Ireland, the “A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012–2022” has been implemented (1). This strategy takes a “lifespan” approach to obesity prevention and is the main obesity policy from which the majority of obesity interventions and relevant health promotion campaigns stem in Northern Ireland. This framework is nearing the end of its implementation period and work is currently underway to review and plan for the next obesity framework for Northern Ireland. In the Ireland, the policy equivalent is “A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”, an initiative that takes a whole-of-government and whole-of-society approach to improving health and wellbeing and the quality of people's lives (24).

In both jurisdictions of Ireland, the application of policy changes have so far made little difference and the rates of having excess weight have remained relatively stable in the last decade (1, 2). Specifically, in Ireland, 60 per cent of the adult population are living with overweight or obesity (2), which is defined as having a Body Mass Index (BMI) of 25 kilograms

per metre height squared ( $\text{kg} / \text{m}^2$ ) and above. Similarly, in Northern Ireland a total of 65 per cent of adults are living with overweight or with obesity (38 per cent and 27 per cent for each category, respectively) (25). Given that the science of obesity is extremely complex, the formulation of effective policy is also complex. The public's view on obesity-related initiatives is of vital importance, with levels of public support predicting policy success (26). Therefore, the involvement of target populations in the policy formation process is key and increases chances of policy success (27).

Currently, there is limited evidence on public perceptions of policies to address obesity on the island of Ireland. A previous survey by *safefood* that collected data in 2013, and was published in 2014, captured levels of support for obesity-related initiatives in Ireland; no data from the population in Northern Ireland was included in the survey. The present project aims to fill this gap by collecting data from adults in both Northern Ireland and Ireland to assess the levels of public support for policies and initiatives to reduce rates of obesity. Additionally, it aims to capture their views surrounding obesity and to explore issues of weight stigma and weight-based discrimination. To achieve this, a mixed-methods approach was taken comprising a quantitative survey and a qualitative exploration in focus groups. Utilising a quantitative survey design provides information on the prevalence of public views about obesity and levels of obesity-policy support and allows testing for the presence of a relationship between policy support and other characteristics through standard statistical procedures (28). On the other hand, a qualitative methodology such as focus group discussions promotes a richer understanding of obesity-related views and the acceptability of obesity policies through individuals' overall experiences. Combining approaches leads to a more complete understanding of the topic (29).



## 2 Aims and objectives

This aims of the research are to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland. The focus of the research is on quantitative survey methodology, incorporating personal and public involvement (PPI) from the outset. Key quantitative findings are supplemented with qualitative research to allow for a detailed exploration of context in the views of the public, something that may be missed by using a quantitative approach alone. The objectives of the research are to

- Provide a comprehensive evidence-based review drawing on the existing published research literature regarding public perceptions of the scale of the obesity problem, public views on initiatives to address obesity and public support for policy interventions to address obesity from across the globe.
- Provide a comprehensive “map” outlining the existing policies and wider initiatives to address obesity across the island of Ireland. This will give an overview of what public policies have been implemented in Northern Ireland and Ireland, and will explore potential options for future initiatives to address obesity based on what other countries have done. Policies and initiatives covered will be extensive, including fiscal (taxes and subsidies), non-fiscal and interventions across a range of settings such as catering standards and food in hospitals, physical activity initiatives and food restrictions in schools, and restrictions on the marketing of food to children through a variety of forms of media, social media, gaming channels and so on.
- Conduct consultations with members of the public through PPI activities and with other relevant key stakeholders (for example public health agencies and policymakers) to aid the development of the quantitative survey (number of consultations or “*n*” = 10: 6 through PPI, 4 with other key stakeholders). This activity will serve to “check” views upon topics included, how obesity is portrayed and described, and appropriate and non-stigmatising wording and terminology.

- Conduct a representative, face-to-face cross-sectional survey with adults aged over 18 years across the island of Ireland to determine public perceptions of the scale of the obesity problem, people’s views on the causes and treatment of obesity, the medicalisation of obesity and “obesity as a disease”, and the level of public support for different policy interventions and initiatives to address obesity; and to assess the demographic characteristics that determine support for policies and initiatives across the island of Ireland to address obesity. This survey will be developed using information from the previous survey, conducted in Ireland in 2013 and published in 2014, and other international surveys.
- Explore key aspects emerging from the quantitative survey analysis in depth through a series of focus groups with members of the public to gain insight into the wider context and reasoning for public attitudes towards obesity policies and initiatives.
- Report in detail on the evidence to provide a resource for key stakeholders to formulate strategies for policy interventions and initiatives to address obesity to maximise uptake and acceptability.

## 3 Literature review

### The global obesity context

A large proportion of the global population is living with obesity, a state of excess weight linked to increased morbidity and mortality. There is wide variation in obesity rates in different countries, and rates of obesity are growing, especially as lower- and middle-income countries develop (30). Between 1980 and 2014 rates of obesity tripled in Europe (16). The unhealthy food environment, lack of physical movement and increased use of technology are widely responsible (8, 9). Genetic analyses show that between the 1960s and 2000s people with similar genetic dispositions would be much more likely to be overweight or have obesity in the current era than previously, indicating heavy environmental influence (31). The current rates and trends in obesity are an international health challenge causing significant morbidity and mortality as well as a large economic impact, as much as 3.3 per cent in Organisation for Economic Co-operation and Development (OECD) countries (16). As countries industrialise and develop one could expect that, into the future, global rates of obesity will continue to increase without intervention and preventative action.

The World Health Organization (WHO) estimates that 59% of adults in the WHO European Region are living with overweight or obesity (31). The highest adult rates in the WHO European Region were observed in Turkey for both overweight (included obesity; 66.8 per cent) and obesity (32.1 per cent). In the European Union (EU), rates of overweight vary between 54.3 per cent of adults living with overweight in Austria to 66.4 per cent of adults living with overweight in Malta. For obesity, the prevalence varied between 19.7 per cent in Denmark to 28.9 per cent in Malta(32). Much of Europe is highly developed and food is generally reliable. Developing countries suffer a high burden of obesity prevalence, with 62 per cent of the world population living with obesity (33) as they undergo a “nutrition transition” (30). Poor diet, including diets high in sugar, fat and salt, and low in fruits and vegetables, has overtaken tobacco use as the world’s leading cause of preventable disease (7). Obesity is associated with a 2- to 4-year reduction in life expectancy (13, 14). In parts of Europe, excess weight is responsible for up to 13 per cent of deaths (16). On a global scale, considering today’s obesity

prevalence rates, the effects of this food and health environment are a cause for concern. Countries are suffering significant health and economic impacts second to excess weight. Developing countries are not only facing public health challenges due to the nature of their development and transition. The exploitation of lack of knowledge, lack of financial power or lack of time can be manipulated, including on an international scale, to mass-market foods of poor nutritional quality. When these factors converge, especially in developing countries with less stringent regulation, poor infrastructure and fledgling health and public health systems, the health outcomes can be considerable. Mexico, for example, has been the product of international exploitation related to the North American Free Trade Agreement (NAFTA) (30), and now suffers with an adult overweight rate of just over 70 per cent, an obesity rate of 32.4 per cent and female obesity rate of nearly 40 per cent (34). These challenges and exploitations place additional burdens on developing countries and their populations already undergoing social transition and societal vulnerability.

The growth in rates of obesity have led to the label “epidemic” (27). Making this comparison has led to some suggestions about how obesity can be managed on a global health level. There have been calls to treat obesity similar to large infectious outbreaks, such as the Ebola and Acquired Immunodeficiency Syndrome (AIDS) outbreak responses (27). Strong similarities exist: individual factors inside of a large social and cultural environment help determine individual risk and disease status (27). Individual choices are of minimal relevance in determining outcome (27). The strong international social and scientific action helped to curb the epidemics of Ebola and AIDS, and other scientific advances have seen many other infectious outbreaks become controllable (27). Obesity, however, remains a very complex problem with the application of scientific advances and innovative policy changes making little difference to global prevalence rates, such as on the island of Ireland (2). In fact, obesity is now a bigger problem globally than underweight (35). While underweight remains a significant public health concern in some of the world’s poorest region, the transition of many developing countries into more prosperous societies has exposed billions of people to obesity risk such as has never been seen in the history of humanity. Strong obesity policy and public health measures on a national and global level are needed to prevent increasing population obesity and the individual morbidity and mortality that can follow. Governments have not only a duty and the potential power to protect their societies from growing rates of obesity but are also compelled to optimise healthcare expenditure and economic efficiency

and care for the general health of the people in their society (36). This is the “social contract” that the population enters into with government: the granting of legitimacy and power in exchange for the right to protection and access to resources, including health (37).

### **The island of Ireland context**

Obesity is a growing problem facing the people of the island of Ireland. Surveys show a significant proportion of people on the island are living with overweight and obesity, including large proportions of the child population. Data from 2011 showed growth in the rates of people living with obesity in the preceding decade in Ireland to 37 per cent of 18- to 64-year-olds being overweight and 24 per cent with obesity: 61 per cent in total (38). Since then, rates have essentially stagnated, despite policy changes and advances in the scientific understanding of obesity. Recent surveys have shown that of the adult population in Ireland 60 per cent, 62 per cent and 60 per cent were people living with overweight or obesity in 2015, 2017 and 2019,(25) respectively. Rates differ between the genders, with 66 per cent of men in the Ireland carrying excess weight. Obesity is a chronic condition linked to a great variety of other chronic (long-term) diseases and associated with increased health costs. The cost of this weight for the Ireland was assessed at €1.64 billion per year, based on 2009 figures (when the population of people living with overweight and obesity was smaller) (17). Men and older adults had higher rates than women and younger adults, with obesity prevalence generally trending upwards as age increases (2, 39). A 10 per cent difference in rate of excess weight has been demonstrated recently between the most deprived and least deprived adult populations in Ireland (65 per cent and 55 per cent respectively) (2). Differences were also found in weight-loss behaviour, with a 4 per cent higher proportion of those least deprived attempting to lose weight (2).

This is by no means purely a problem facing the population of Ireland, but rather the entire island of Ireland, and, as shown, the EU. Rates are similar in Northern Ireland, with a total of 62 per cent of adults being above a healthy BMI, 37 per cent being overweight and 25 per cent with obesity (25). Like Ireland, these figures have seen little change in the past decade, despite policy changes. Males, again, were more represented in the “people with overweight” category (40). Prevalence of obesity continues to place a large economic, social and health cost on Northern Ireland, as it does in Ireland.

Of particular concern is the overweight and obesity prevalence rates in children. As obesity is linked with multiple other chronic diseases and infers a health risk related to amount of time spent living with overweight or obesity, children suffer a high risk of future health complications related to excess weight (41). According to the “Childhood Obesity Surveillance Initiative” run by the WHO, 9 per cent of boys and 5 per cent of girls in Ireland are living with obesity (42). This was similar in Northern Ireland, with 8 per cent of children living with obesity (25). Though these numbers are cause for concern, other European nations have rates of childhood obesity higher than the island of Ireland, with the WHO finding that in Cyprus 43 per cent of children are living with overweight and 21 per cent of boys are living with obesity. Up to 26.8 per cent of children in the most deprived subsets of the population in the United Kingdom (UK) – the closest neighbour – are living with obesity (42, 43). This figure also highlights the heavy socioeconomic gradient in health and obesity statistics: in the same age group only 11.7 per cent of children are living with obesity in the least-deprived populations (43). This has also been shown in the adult population on the island of Ireland (2). As stated, obesity rates on the island of Ireland tend to increase with age and therefore a child with obesity is more likely to have obesity in their adult life, conferring health risk (24). It has been estimated that 80,000 premature deaths will be attributable to childhood overweight or obesity now and in the future, based on the current levels of childhood obesity on the island of Ireland (44). It is for this compounding reason that prevention of obesity, particularly childhood obesity, is so critical. Children are seen as a particular population on which to focus intervention, due to the lifelong risk of comorbid medical conditions (more than illness or dysfunction at a time) and social and mental unwellness, coupled with lack of awareness of long-term outcomes (9, 45).

Ireland and Northern Ireland are both in the midst of a public health challenge due to high prevalence of obesity within the population. The social, health and economic costs of these rates are significant. Particularly worrying is the prevalence of childhood obesity, and the lifetime risks for health and increasing rates of obesity are a major cause for concern (45). Overweight and obesity status in children on the island of Ireland now affects one-quarter of children and the lifetime cost of this extra weight is judged to be €7.2 billion (44). Conservative estimates of the savings from reducing BMI by 5 per cent in children are judged to be near €1.4 billion (44). Interventions to reduce the rates of childhood obesity are generally widely supported (46) and are essential. Prevention of childhood obesity may avoid

future health issues . The rates of obesity have stalled on the island of Ireland despite policy refinements. However, the island is not alone in this. This is a global public health issue and a challenge for many countries, especially developing nations.

### **Factors contributing to obesity in society**

To curb the local and global crisis of obesity, robust evidence is needed around the cause, development and effect of obesity, as well as effective interventions and policy plans that can help improve population health and prevent morbidity and mortality. In terms of obesity research, the public health literature focusses on the Body Mass Index as a measure of obesity. It should, however, be noted also that while BMI, even in conjunction with other measures such as waist circumference, is useful for morbidity and mortality assessments on a population scale, it very poorly correlates to personal health risk, quality of life and functionality (47). Measurements of BMI and waist circumference lack sensitivity and specificity when applied to individuals (48). There are limitations in making individual health assumptions based solely on BMI; however, for use in population health, where assessments of individual health and risk are not needed but instead the risk of an entire population *is*, BMI can be used as an indicator of population health risk. Frameworks such as the "adiposity-based chronic disease" (ABCD) framework have developed out of the weaknesses of BMI in predicting individual outcomes, especially between ethnicities and different body shapes, and acknowledge the context, including of the obesogenic environment, and the individual chronic disease state (49). Frameworks are used to predict and to prevent. The increasing awareness of frameworks such as the ABCD framework highlight 2 important trends in obesity research: the contribution of the environment and the need for risk assessment and prevention. Prevention is the key to managing obesity population rates.

The factors that lead to obesity are notoriously complex (8). The development of excess weight occurs within an environment with multiple, complex interactions and contributions. These factors include (but are not limited to) food systems, social experiences and norms, urban design, the economic environment and social protection (50). Within food systems, production, manufacturing, retail, advertising, service, price, supply, availability, information provision, preferences, experience and culture all play a role (50, 51). Within the environment, community, street and urban design, land use, transportation, facilities, service accessibility, green space accessibility, safety and child institution policies all have an influence and go on to influence physical activity and sedentary behaviour (that is, sitting down for much of the

time, or otherwise inactive behaviour) (50, 51). These factors sit inside of wider social and economic factors such as population vulnerability, access to housing, government welfare and assistance, public health system utility, education quality, working conditions and early life experiences (50-53). The negative presence of these factors produces vulnerability; positive improvement leads to prevention. Another layer of complexity is added by the rapidly changing global environment and the potential for nutrition to become further compromised and obesity more severe due to climate change (54). Tackling this issue is complex as a variety of interrelated, multifactorial influences exist in arenas that are very different and difficult to change, with change in outcomes difficult to prove (55) and, therefore, widely implement with reliability.

It is this complexity and interrelatedness of factors that mean obesity is a difficult problem to manage from a public health perspective. Complex problems require complex, multisectoral solutions, a “systematic, sustained portfolio of initiatives, delivered at scale” (13). The traditional model of blaming individuals for developing obesity and focussing solutions solely around encouraging people to take responsibility for their weight is shifting. Much responsibility for rising rates of obesity has been pointed at governments that fail to mitigate economic inequality and hardship, with some policy guidelines including housing cost control and social protection as vitally important in reducing obesity rates, as obesity is routinely shown to affect disadvantaged populations disproportionately (52), including on the island of Ireland (2). Governments have been called on to act, to break the cycle of “policy inertia” that results in patchy policy implementation and lack of significant population health change (54). They have to act by intervening to protect citizens and enforce all-government, multisector approaches (56). National governments are being pressured to strongly act, efficiently, effectively and quickly (16, 54, 56). Realising the complexity of the development of obesity, and the interaction between nature and nurture, helps the recognition that obesity policy is not a single-intervention disease.

Though reducing population obesity rates is proving to be complex globally (54, 55), some case studies have been instructive. More successful programmes have taken into account the unhealthy food environment, the amplification effect of vulnerable communities and the influence of social norms in the context of a programme that relies on strong political commitment, precise understanding of the cultural and policy context, intersectorality, long-term perspective and constant review and “reorientation” or adjustment of aims and



strategies (53). One initiative that had particularly successful results was a trial in the Netherlands called the “Amsterdam Healthy Weight Approach” (53). While a relatively small initiative compared with the global scale of the obesity epidemic, and while only focussing on childhood obesity, the “Amsterdam Approach” made specific leaps to include sectors outside of the traditional “public health bubble” (53). The results from the programme, while not yet published in the peer-reviewed literature has shown positive results, for example reducing the rates of children classed as “overweight” from 11.2 per cent to 9.9 per cent and reducing obesity from 4.3 per cent to 3.1 per cent in 5-year-old children (53). However, the successes may be location-specific and, while the concepts of the programme may be transferable, success of similar initiatives would require significant local support within a local context. Generally, “holistic” (whole-system, integrated) obesity policy focussed around reducing population BMI is difficult to achieve and, therefore, proving that certain interventions have appreciable effects on population obesity rates can be disheartening (45, 55). Some large-scale analyses find very little evidence of interventions that are consistently effective in reducing population BMI (55). This does not mean it is an impossible problem to solve, or that interventions do not work to improve population health; but it does show just how complicated managing population obesity rates is.

### **Public perceptions of the causes of obesity**

The field of obesity research is growing. Significant questions remain, however, around how best to manage this at a policy level. The focus of public health and public health policy is to avoid and prevent morbidity and mortality. By intervening, especially to prevent childhood obesity, general population health can be improved and harm from population obesity can be reduced (45). The difficulties in proving the efficacy of an intervention speak to the complicated interplay of influences that result in the development of obesity. Research has highlighted public views around the causes of obesity, and the acceptance of government interventions to help curb the crisis. There is generally widespread community support for obesity interventions (13). The complexity of the causes of obesity is widely recognised among the public but this leads to a complex assignment of blame (13, 57). In a Scottish survey, respondents support statements that obesity is more complex than individual choices, with up to 91 per cent identifying the cost and ease of cheap, fast food as contributing to the obesogenic environment (13). However, the same sample showed that 85 per cent believed individuals should bear the main responsibility for reducing rates of obesity (13). When faced

with the complex and difficult-to-conceptualise pathways that lead to development of obesity, people may see the individual as the uniting point between diverse and disparate systems, assigning blame to that point, when the real situation is extremely broad, complicated and interrelated.

However, despite increased awareness of the complexity of the science and the health implications of obesity, obesity may be becoming less recognisable. “Shifting norms” in society have been found to be present, where, as population obesity increases, the perception of a “normal weight” also increases (13). Less ability to distinguish a scientifically-defined “healthy weight” means less recognition of “unhealthy weight” and under-appreciation of the impact of obesity on society (13). Some studies show that 50 per cent of people meeting BMI criteria for obesity may not class themselves as living with obesity (58). Healthcare professionals have also been identified as under-recognising overweight and obesity. Physicians may only recognise a person with overweight correctly in 20 per cent to 30 per cent of patients (59). Accurate detection of unhealthy weight and an awareness of the scale of the crisis are essential in provoking public involvement in management. Public inertia for change and stronger government leadership and policy will lead to greater successes. Without this, policy power could be greatly reduced.

Public attitudes towards people with obesity seem slower to shift than weight perception. As previously highlighted, people acknowledge the societal food environment can lead to rising obesity rates; but a significant proportion of the population places significant blame on individual choices and behaviours, identifying them as a key causative factor in the growing numbers of people with overweight and obesity (13, 26). Analysis of “retweets” on Twitter™ showed that people are more likely to share and retweet obesity messages that focus on individual blame, more than social or environmental blame (60). Analysis of videos uploaded on YouTube™ showed a much higher frequency of obesity being related to “lack of individual discipline” than wider social or environmental factors (61). Analysis of media representations of overweight people from around the world found examples of “negative or dehumanising” representations of individuals with obesity in each country analysed: “a worldwide issue” (62). Even analysis of primetime television showed that characters with negative traits were more often people with obesity and that male characters with obesity were more often shown eating than characters of healthier weights (63). It is within this environment of an extremely complicated disease state, with a decreasing awareness of the delineation between a healthy

and unhealthy weight, and ongoing individual blame, that adds extra layers of complexity in managing weight on a population scale and extra hurdles for obesity policy to clear. As said, public motivation for change will be essential in changing the environment; therefore, an awareness of the scale of the crisis, a conceptualisation of the complex interactions leading to obesity, a belief that multipronged government policy can help and a desire to build a healthier environment where the vulnerable are protected will be needed on an appreciable level to make the reformations needed to reduce obesity rates. Strong policies are needed at every phase to foster, guide and move with the changes. How policy should achieve this, however, is also complicated.

### **Formulating obesity policy and the complexities of policymaking**

Policy is how the Government carries out its role of governing. Public health policy aims to prevent unnecessary harm, morbidity and mortality through government intervention. Policies vary in scope and application. The degree to which they impose rules on individuals in society can be classed in a hierarchical manner, sometimes called an “intervention ladder” (64). At the bottom of the scale is no action or intervention, or purely monitoring and surveillance (64). Higher up the ladder, policies begin to focus on information provision and choice enablement, before moving into more intrusive and restrictive measures such as introducing regulation and guiding through incentive (encouragement) (64). Following on from this – with more intervention – is the use of disincentives (discouragement). Finally, restriction and elimination of choices of individuals by government is seen as the more intrusive type of intervention in health policy (64). Outside of a hierarchical measure, policies can also be split into realms of actions: child-focused policies, informational interventions, fiscal measures, industry regulation measures (65) and wider social policies. These different realms of policy action have different effects on public health and have different levels of acceptability. The task of policymakers is to secure policy support, as this is integral to policy success (13, 14, 26, 46, 66).

Many recommendations have come out of analyses of how obesity policy should be formulated, framed and applied to increase public support for policy. “Low-blame” framing is more likely to increase policy support in the context of obesity policy (57). Positive framing of any pricing changes, taxations or subsidies has been advocated, such as promising revenue reinvestment into health programmes (14, 46). Studies to date have shown that when raised revenue is ringfenced (specifically designated) for public health interventions, they are seen

more positively, meaning they would be more supported (14, 46). Framing regulation as being targeted at industry instead of targeting individuals can also increase policy support amongst the public (67). Outside of framing, rule-based policy changes have been thought to be effective in changing social norms (9), and shifting social norms leads to more policy support as awareness is raised (67). The perception of how paternalistic (controlling and restrictive) the policy is and who the policy is aimed at can be deciding factors in its success, and how these policies are represented and rolled out is vitally important.

As obesity policy must intervene in such a complicated health state, no single policy intervention will suffice on its own. A raft of interlinked interventions is needed for any obesity-related policy. A mix of universally applied policies, coupled with policies targeting vulnerable groups, has been advocated – but in a refined, considered application to avoid “othering” and applying “white middle-class values” to all of society (50). Unified agreement in policy formulation of what is meant by “health equity” is essential (50), as is involvement of relevant communities in the policy process (27, 68). Different communities and populations have different needs; as shown, the most deprived tend to have higher rates of obesity and policy action related to these communities may well be different to the least-deprived with lower rates of obesity. The involvement of target populations in the policy formation process is key, as stakeholder consultation increases chances of policy success (27). The involvement of these populations “help to build and sustain the political incentives that are needed to drive meaningful action” (27, 69) and is essential in long-lasting public health success (64). The specific needs of distinct populations must be identified and policy implemented in a respectful, applicable and reactive way. Otherwise, policy risks failure.

Overlooking stakeholder communities is not the only cause of policy failure. Policies have been identified to fail for 4 major reasons: poor design, underinvestment, inconsistent governance and accountability and underestimating the response needed (45). An ineffective policy can be harmful, misusing time and resources and potentially eroding public support for government intervention. The effects of policy failure could mean less policy support from the public in subsequent rounds of policy updates. The perfect application of obesity policy has yet to be seen, as it is noted that comprehensive obesity policy actions and accountability have not been fully implemented in any country (45). Political leadership and engagement are necessary in formulating and implementing holistic policy on a national level (27). International health organisation recommendations are watered down at a national

level, often focussing heavily on individual blame rather than on systemic, societal problems (45). This has been proposed to be, in part, due to food and drink industry lobbying (45). Again, facing such an immense task of encompassing the breadth of scientific knowledge of obesity and factoring in the fine detail of obesity management into holistic policy is a challenge and, so far, most national governments have not yet been able to formulate policies that manage to address the vastness of the challenge, preferring the thinking that the individual is the target point on which all policies should focus. Fixing the injustices and inequalities in the social determinants of health is a much more immense task than saying “individuals need to change”.

Effective political leadership is an identified major challenge in global obesity policy (9). Part of the successes of the “Amsterdam Approach” were attributed to the strong political leadership of the Amsterdam deputy mayor, Eric van der Burg (53). His initial enthusiasm and plan were able to persuade other government departments to become involved without providing additional funding and then, as the programme was rolled out further, funding was made available based on the success of progress (53). Studies investigating the feasibility of implementing an Amsterdam-style obesity policy in a different environment have noted that strong leadership, such as that seen in Amsterdam, would be a “key ingredient” (70). A motivated leader can muster resources, raise awareness and build enthusiasm for a common, unified goal, which can be improving population health and reducing obesity prevalence. As stated earlier, unified goals and unified beliefs about health equity are needed (50) and strong political leadership can help achieve this.

Special mention of industrial lobbying should be made, as this has been identified as a major barrier in smooth application of policy actions (9, 14, 45, 54, 68, 71). Studies have identified the food industry as major contributors to the obesity epidemic, citing their involvement in managing the obesity environment as critical (27). One study identified as many as 23 separate strategies that the sugar-sweetened drinks industry has used to spread misinformation and seed doubt, a process labelled “corporate agnogenesis” (72). The tactics identified in which the food industry creates doubt around the science, or shifts blame to avert regulation, alludes to the early battles against the tobacco industry (72). Added to this, with the process of globalisation and trade agreements, multinational food industry corporations restricted in more developed countries are able to target less developed countries where public health systems are not as highly regulated, such as highlighted in

Mexico, with American food companies unrestricted by NAFTA (30). The outcomes of this are significant for public health. It is not just an issue of targetting the developing world, however. Countries are obligated to protect citizens from public health interference from third parties, and many are not fulfilling their obligations to protect citizens (27).

### **Types of food policy interventions and their effects on public health**

Policies can range from information provision, through increasing levels of government intervention, up to more restrictive policies such as eliminating choices targeting public health. As government intervention increases, personal freedoms and choice are generally reduced (64). In the field of obesity policy, simple interventions can be effective. Information campaigns as a public health intervention are widely accepted but usually less effective (26, 66), though they do have an appreciable effect on changing individual behaviour (46). Studies show 3.4 per cent to 9 per cent decreases in the purchase of sugar-sweetened beverages after mass-media campaigns (73, 74). Providing point-of-purchase information to consumers can be effective. Food labelling that informs the consumer of the content of their intended purchase has been shown to be effective in creating reluctance to buy in the case of unhealthy foods (46). Reformation of food labelling and easy-to-understand nutritional guides and warnings are promoted by international health organisations. The World Cancer Research Fund (WCRF), using their “NOURISHING” framework guidelines (discussed later in this section), promote national governments to regulate for “clearly visible ‘interpretive’ labels” as a means of informing the public about nutrition when buying food and drink products (75). Simple information campaigns and regulations are effective, relatively simple and empower people to choose healthier options within an obesogenic food environment.

Regulations and laws aimed at industry can also be effective and usually also cost effective. Policies aimed at reformulating processed foods have been shown to be effective at a population level and banning “trans fats” (trans-unsaturated fatty acids – liquid oils that have been made into solid fats by food producers) in particular is cost effective (76). Part of this cost efficacy is healthcare savings, which, outside of the realm of pure economics, relates to real changes in individual morbidity, mortality and quality of life. One analysis in Denmark showed a trans-fat ban reduced cardiovascular deaths by 3.2 per cent (76). This reduction is significant, considering it is a single intervention. However, it is not just regulated restrictions that affect population health. Restrictions can also be effective when voluntary. A national health strategy in Brazil monitored the effects of a voluntary salt-reduction

initiative, with positive results: over a 6-year period, the average salt content in more than half of food categories reduced by 8 per cent to 34 per cent (76). The effect on individual health was also significant, with a 15 per cent reduction in urinary sodium (salt) levels seen among the population over a 7-year period (76). These are not mild results; they have large population health implications. The types of policy and regulation changes that make people consider their options more strictly often do induce a change and this information can drive market forces, transforming the wider environment. In conjunction, industry regulations can have appreciable effects on population intake levels.

A stronger version of encouraging healthy choices and guiding industry is the use of taxation or levies. Taxations are usually less supported in studied European and Western countries but thought to be more effective, especially when directed at children (26, 45, 66). Taxes are traditionally opposed if they are seen as unjustified or misspent (36, 66). Strong government intervention and encroachment on individual freedoms can be opposed and classed as overly controlling, sometimes referred to as a “nanny state” (14). Taxation is viewed as intrusive and a significant proportion of the population holds the view that the Government should not interfere with individual decision-making (26, 68). Taxation is sometimes viewed as regressive (taking a backwards step or not advancing), hitting the most vulnerable hardest (14, 68), (77), and this is coupled with a mistrust of government taxation (66) or the view that taxes are arbitrary (unplanned and unfair) (36). Incentives for vulnerable populations to buy healthy foods has been ethically classed by some as being overly controlling and potentially stigmatising (77). Taxation can cause a lot of disagreement and sits high on the intervention ladder for its intrusive nature.

Despite findings that people see taxes are regressive, intrusive or not useful at influencing behaviours, evidence shows that consumption patterns can be very price dependent (9, 66). One study cites evidence of 5.8 per cent to 21 per cent decreases in sweetened beverage consumptions in different jurisdictions after taxation and the greatest proportion of change was seen in financially disadvantaged groups (68). Rather than exploiting vulnerable people with little option of individual agency (that is, a person’s ability to take action and effect a change), the greatest benefits were instead seen in vulnerable populations (68). A modelling study of a 20 per cent price increase tax on high-sugar foods predicted that, if instituted in the UK, low- to middle-income households could lose up to 2 kilograms (kg) and obesity prevalence would fall 2.7 per cent nationally in the first year (78). If this were the true effect,

the impact on public health would be significant. Analysis has found that new taxes accompanied by awareness campaigns about the new taxes can make those taxes more effective (23 per cent, in a Mexican study) than just a levy (a tax or other charge) on its own (79). So not only does the evidence show that taxation is effective but that taxation is most effective on vulnerable populations, who, in the case of obesity, are often the most harshly affected by the obesogenic food environment. Policy changes, including taxes, on sugar-sweetened beverages have been deemed the most cost-effective measure in obesity policy, saving 55 times the money invested (80). Cost efficiency of taxes on sugary drinks is followed by reduced marketing of “energy-dense, nutrient-poor” foods, saving 38 times the amount invested (80). Public perceptions may view taxation negatively but evidence shows that taxes are an effective intervention to improve public health.

### **Factors that affect health policy and obesity policy support among the public**

Much of the aim of government intervention is to change and challenge the way people think about themselves, the environment and their choices. The difference of opinion between experts and the public will always exist in every field, and often leads to a divide in opinions. Experts have a unique insight into the systems that result in a defined change, such as the interactions that lead to increases in obesity prevalence. Bridging the gap between expert-driven policy intervention and the lives of the public is important if positive change (in the direction experts advocate) is to be seen. The way in which this is done is crucial in predicting outcomes. The science of obesity is extremely complex, the formulation of effective policy is extremely complex, and the increasing of public support for government policy is also extremely complex. Uniting these multiple systems and forming policy that has an appreciable effect on public health is challenging. This may be part of the reason that no holistic policy has been rolled out in any country on a national level (45)

People’s view on policy is of vital importance. Multiple factors have been implicated in policy support from the public – which will be explored later in this section – and policy has been shown to be very sensitive to popular opinion, with levels of public support predicting policy success (13, 14, 26, 46, 66). Different strategies have been shown to alter public perception of policies, such as striking a balance between personal choice and restriction, raising awareness of complexity, accounting for complexity of opinions and ringfencing tax revenue



for health programmes (14, 26, 46, 66). Policies around childhood obesity are generally supported (46). As the knowledge base grows, and the complexity of obesity as disease is starting to be recognised, shifting norms in society can mean that people's perceptions of the obesity crisis shift (46). The perception of overweight and obesity can also affect the judgement of severity of the problem. Women, older people, people with lower levels of education and people on lower incomes have been shown to be less able to recognise obesity (13). This underestimating the severity of the problem may result in less policy support. Few demographic factors have been associated with increased policy support. Some studies identify higher educational attainment as predicting more support (46), while others dispute this by proving lower support (81). People who partake in unhealthy eating regularly have been shown to be less likely to support obesity policy (66). Little association has been shown between policy support and other factors such as BMI, perceived weight, socioeconomic status, gender or political alignment (26, 46, 57). Wider cultural, social and informational spheres can have more effect than individual demographic differences.

Policy support has been shown to increase with increased public knowledge on the subject, increased experience with policy and increased awareness of the problem (46). Linked to this, policy support grows over time, linked to experience of previous policy (36, 46). Successful policy leads to more successful policy: a positive-feedback loop. The perceived efficacy of a policy predicts higher levels of support and asserting the successes of policy is more likely to lead to successful policy implementation (66). Quantifying policy success in numbers has not been shown to increase public support more than asserting success (66). An experience with policy, along with proofs of the results of successful policy implication, is an effective environment in which to build on past successes with new policy. However, building policy support is more complicated and challenging than simply affirming successes. A large part of the challenge is accounting for the broad range of individual opinions within a society, and the way in which these affect policy outcomes. In reference to obesity policy, the personal perceptions of the public play a major role, and this is highly related to the assignment of blame for the causes of obesity. Those who believe that the external environment ("external attributions") is a significant factor in the development of obesity are more likely to support policy intervention. Those who ascribe more blame to a personal failing or individual characteristics ("internal attributions"), including personal motivation and genetics, are less likely to support policy intervention (13, 26, 36, 82). A key challenge for public health

advocates, therefore, is to try to communicate scientific information about the complexity of the disease to raise awareness of the complexity of contributory factors; but, as stated, being aware of the complexity can lead to a very complex assignment of blame, potentially decreasing the efficacy of policies and the amount of public policy support (13, 57). Within the world of obesity policy, moving away from individual blame prevalence is a key challenge and action point. Influencing the way people think, without forcing a view on them, is another balancing act that policymakers and experts need to consider. Raising awareness of the complexity of the causes of obesity is suggested as a route to increasing policy support (26), as is focussing on the external attributions for obesity over internal attributions (82).

Increasing public awareness brings experts and the public closer together, aiming to unify their views on what is an acceptable intervention as the shared knowledge becomes unified.

Obesity policymaking is a delicate area. People retain their own opinions about the function of governments and policy and their own views on what is accepted government intervention. Policy framing and focus can have an impact on policy reception and support. Analysis of policies implemented has shown that phrasing and word choice emphasising human agency was associated with higher public policy support compared with simply stating that external factors are a significant cause of obesity, as overt statements may clash with personal beliefs and may be dismissed (82). Subtle differences in policy implementation can affect population receptivity and uptake. Some researchers theorise cultural worldview as having an effect on policy support as cultural cognition frames the way individuals believe people and government should interact and what a “moral society” looks like (83). (“Cultural cognition” refers to the tendency of people to form beliefs about societal dangers that reflect and support their idea of the “ideal society”.) Therefore, perceived efficacy of policy should be coupled with maintaining the perception of choice in individuals, avoiding the feeling of government intrusion in personal matters and beliefs. A balance between encouragement and intrusion needs to be struck, such as changing attitudes through small changes in the environment, called “nudging” (66). The term “nudging” infers it is a small push in a certain direction, rather than a forceful shove that risks resistance and backlash. Encouraging healthier choices, providing alternative choices, maintaining the sense of control and maintaining public support are essential in implementing successful obesity policy.

Moving up the ladder of policy interventions further, policies can use taxation to guide the population towards certain health goals. Taxes are often viewed negatively (36). There are,

however, ways in which support for new taxations can gain wider public acceptance. Support for taxation grows when commitments to recycle raised revenue to health programmes are made (14, 46). This combats the notion that taxes are arbitrary and taken for general government spending. Higher rates of support for policy correlate with more willingness to pay taxation (36). Therefore, more public support for taxations means more effective taxations, which means more support. Reinvesting unhealthy food tax revenue into public health is inevitably cost-effective, as shown earlier (80). The cost efficiency of taxation of unhealthy foods is impressive and can influence changes in the population, reducing consumption of unhealthy foods, especially in the most deprived populations (68). If used properly, taxes can also increase revenue to be reinvested into health programmes. In terms of public support for obesity policy, changes focussed on the health of children are dependably popular (46). Children are universally classed as a vulnerable group worthy of protecting from harm. Childhood obesity prevention is vitally important for long-term health (41). Policies focussing on childhood obesity are generally widely supported in most forms (46) and interventions in the first years of life are likely to have significant preventative health impact (84). This has been shown in the international literature but also proven within the Irish context. The previous *safe food* survey, published in 2014, found that the sample of participants in Ireland broadly supported most potential obesity policies, except for changes to health insurance pricing, and were especially supportive of child-focussed policies (65). Promotion of healthy eating in schools had a 92.6 per cent support rate in the sample from the previous survey, the most publicly supported policy intervention to help reduce rates of obesity in Ireland (65). The challenge for policymakers and public health advocates is to gain similar levels of support in the other realms of policy intervention, such as information campaigns and taxations.

### **Implementing holistic obesity policy**

Prevention should be the primary focus of any public health policies. This has not yet been seen around the globe at national level (45). This is a developing field: if national policy is not holistic enough it can be informed and evaluated so that better policy can be formed. Holistic policy that does not focus on individual blame and strikes across multiple sectors and domains (areas of activity and interest) should be the goal of policymakers. International health bodies offer a range of policy areas to manage obesity rates, and a number of frameworks for how the factors leading to obesity can managed have been devised. These

frameworks promote multifactorial, multisectoral action. The “NOURISHING” framework devised by the WCRF focussed on a number of subcategories under 3 main factors: the food environment, food systems and behaviour-change communication (85). The WHO advocates 36 different interventions in childhood obesity alone and states appropriate complementary measures that member states should take, such as ensuring robust BMI surveillance, coordinating sectors and taking responsibility and accountability for national policy (41). International bodies generally support food taxation as a mode of behavioural change (41). Evidence analysed by the OECD led them to recommend for their member countries front-of-pack, easy-to-understand food label symbols indicating food nutrition (for example “traffic light” systems, health scores, star ratings and so on), calorie information in restaurants and long-term mass-media information campaigns (34). They recommend these are combined in multifaceted, wide-scope policy projects (34). They also note the rapidly growing field of social media information campaigns, which shows preliminary evidence of effectiveness (34).

Policies that overlay the island of Ireland vary in their practical implementation and their effects but do well to cover many of the policy action points suggested by international bodies, as assessed through research for this project. Research currently in development shows that Ireland and the UK are assessed as international benchmarks for policy implementation in many target areas for food policy. Policies and initiatives such as “Healthy Ireland”(86), “A Fitter Future for All” (1) and “Everybody Active, Every Day: Framework for Physical Activity” (87) rate well in their scope, goals and implementation plans.

As shown, a “systematic, sustained portfolio of initiatives, delivered at scale” is needed for effective obesity policy. The goals need to be encompassing but also specialised; inclusive but also targeted; idealistic but also reasonable. They also need to be multifaceted. They need to take into account the social determinants that help shape a person’s experience. They need to have unified goals and promote social justice. And they need to be acceptable. As identified in the previous (2014) *safe food* report (65), policies imagined and enacted fall into 5 categories:

- Child-focussed policies, including food teaching in schools and banning vending machines
- Informational interventions: All informational and promotional campaigns aimed at the adult public, including nutritional awareness and food labelling policies

- Fiscal measures, including targeted taxes, subsidies and Value Added Tax (VAT) measures
- Industry-regulation measures, including portion-size control in restaurants, health insurance changes and banning special offers on unhealthy food
- Wider social policies, including urban planning, active transport and sports promotion and policies that address reducing inequalities

As is very topical currently, special mention should be made about the impact of climate change on policy. With the “European Green Deal” (88), which will be being implemented in the coming years, aiming for carbon neutrality by 2050, the requirement will be made that climate and sustainability factors be taken into account in all policies, regardless of sector. Wider social policies have a part to play in future obesity policies, such as policies aimed at encouraging active transport and green areas. However, fiscal policies and industry regulations also have a part to play in pushing for lower emissions. As mentioned earlier, markets can be responsive to consumer demands, and obesity policy that promotes increased intake of fresh, sustainable fruit and vegetable and lowered intake of meat products will benefit both population health and environmental health and encourage markets to respond (89). Policies around active transport may encourage more people to travel with less pollution-emitting forms of transport and increase ridership of public transport through interest. Individual health, population health and environmental health are not only intrinsically linked but the interplay between them will also be very important in the upcoming years, with the EU focus on environmental impact and sustainability in all policies.

While extensive research exists focusing on the causes, complexities and interventions relating to obesity (90, 91), relatively fewer studies have looked into effective obesity policies for improving public health (92). While many studies have been found that analyse the factors at play in public support for obesity policy, these were often very different, contradictory or had a narrow focus.(14, 57, 93) Data on public support for policy on the island of Ireland, and the effects of policy in Ireland and Northern Ireland was limited. More analysis of demographic factors that predict public support and how these factors relate to specific present and future obesity policies is needed, particularly on the island of Ireland. This is especially necessary for future potential policies, to look holistically at the wider food environment, whilst considering climate change and sustainability (54).

The aim of this report is to help inform these and other current and future policies to help reduce the rates of obesity within the population of the island of Ireland. This will be done by assessing the public's perception of the acceptability of different enacted and potential health policies. Public support for policy is a crucial pillar of policy success. By gauging public acceptance and by showing that acceptance improves over time and with policy awareness and experience, this report intends that, going into the future, obesity policy will be stronger, more intuitive, contemporary, holistic and, of course, effective.

While there is data for public perceptions of obesity policies in Ireland, it has been more than 6 years since the previous **safefood** report assessed the acceptability of policies to address obesity in Ireland. Over this time, the health policy environment has changed, and it is of vital importance to have recent local data. Also, the global policy environment has changed, and new evidence is exploring new realms of policy intervention such as taxation and wider social programmes. In addition the benefit of strong political leadership is receiving attention and it is in the context of these changes that this project was conducted, providing data to guide future government decision-making and policy formation.

# 4 Methodology

This research aimed to employ a cross-sectional design with a randomly selected quota sample of 1,000 adults across the island of Ireland. The survey was built upon the previous survey published by *safefood* in 2014 (65), which arose from an analysis of a random, stratified (subcategorised) sample of 501 people.

Initial steps in designing the present survey included a literature review and “policy mapping” exercise to inform which domains for policy interventions should be included in the survey. After drafting the survey, a PPI and stakeholder consultation exercise took place to aid the development of the survey, which was in turn pilot-tested for length and suitability before finalisation. More details are provided for each of these steps later in this section.

## Literature review

A comprehensive literature review was conducted to provide an understanding of people’s perceptions of the scale of the obesity problem globally to contextualise any findings from the island of Ireland; and to provide an understanding of the public’s views of policies to address obesity and of the public’s support for policy interventions to address obesity. Ultimately, the literature review helped identify which measures to include in the survey.

The objectives of this literature review fed into the wider project as a whole:

1. Review the current literature around the scale of the obesity problem in society and the opinion of the public around policies to address obesity. The main purpose of the review was to guide development of the questionnaire for the quantitative survey portion of the project.
2. Undertake a policy mapping exercise to review existing policies, initiatives, laws and regulations on the island of Ireland, to identify the current state of the obesity policy environment and gaps that could be addressed. This task was also for the purpose of guiding the questionnaire in the survey portion of the project and will be used jointly with the literature review.
3. Embed PPI and stakeholder consultations with 11 participants to build upon the work of the literature review and policy mapping exercise, to inform the questionnaire in the survey portion of the project.

4. Survey a representative sample of 1,000 participants across the island of Ireland, to test public support for obesity policies, with policies and questionnaire topics being established from the literature review, policy mapping and PPI exercises.
5. Undertake qualitative focus groups to give context to the findings of the quantitative survey.
6. Propose recommendations to inform future obesity policy on the island of Ireland.

### **Policy mapping exercise**

A “map” of obesity policies and initiatives on the island of Ireland (Appendix 1) was created to give an overview of the public policies that have been implemented in Northern Ireland and Ireland and explore potential options for future initiatives to address obesity, based on what policies other countries have implemented.

### **Quantitative survey**

The development of the new (2020) survey was informed by the survey used in the previous (2014) **safefood** report, along with the literature review and the policy mapping exercise.

### **Personal and public involvement (PPI) and stakeholder consultations**

After drafting the survey, a PPI and stakeholder consultation exercise sought the opinions of 11 individuals who were involved in the field of health, health policy or health research, or who were living with overweight or obesity. The PPI participants were split between Northern Ireland and Ireland and provided feedback on the length of the survey, language and content. Following the completion of the consultation, a meeting with the research team and partners finalised the survey document based on PPI suggestions. Significant attention was given to the language used within this survey and the potential for stigmatisation. Emphasis was placed on making people feel comfortable when expressing views about their own weight and on consistently using “people-first language” throughout (which puts the person before their diagnosis, describing what condition the person *has* rather than stating that is what the person *is*), whilst maintaining comparability between the previous (2014) **safefood** report and the current (2020) survey (Appendix 2). The research team conducting the project fully support the use of person-first language when discussing obesity and this is reflected throughout the report. The report contains however, retained verbatim quotes and comments from participants within the research on the topic of obesity which may not reflect person-first language.



## Pilot testing

After updating the survey based on the consultation, 2 stages of pilot testing were conducted by the Social Market Research (SMR) agency, which undertook data collection for this project. Initial pilot testing with 10 people resulted in length reductions by deleting several questions and making wording edits. The revised survey was then piloted with a further 20 people (15 in Dublin and 5 in Belfast) who advised deleting more questions as the survey was still deemed to be too long. The sequence of the specific stages that aided the development of the final survey and the way they fed back into it are presented in Appendix 3, Figure 4.

## Measures

The finalised survey, which took approximately 20 minutes for respondents to complete, comprised of multiple sections and measuring scales (Appendix 4).

### Health and wellbeing information and demographic characteristics

Both sections were based on the previous (2014) *safefood* survey with some adjustments and a focus on people-first language, as suggested by the PPI. Demographic questions were self-reported covering age, nationality, marital status, education, occupation of household main income earner, height and weight and type of medical insurance (for respondents in Ireland, due to differences in health insurance regulations between jurisdictions).

### Views about obesity

This section included the “Obesity Beliefs Scale” (OBS), as published and validated (proved to be reliable) by Swift et al. (2007). The OBS is a psychometrically sound measure of beliefs regarding the consequences of obesity and healthy weight for individuals aged 12 years and above. It comprises 3 subscales on health beliefs, social and aesthetic beliefs and costs.

### Views of policy interventions

The section consisted of statements relating to support for obesity-related policies and was based upon the previous (2014) survey, which had been adapted from the “Eatwell” survey.<sup>(81)</sup> The “Eatwell” survey explored acceptance of nutrition policies in 5 European countries (the UK, Italy, Belgium, Denmark and Poland) and included 20 items (that is, questions or other measurements) in relation to acceptance for advertising measures, information measures, regulatory interventions and fiscal measures. Thirteen additional items were incorporated in the present survey that arose from recent local and international developments, based on the review of the literature and the policy mapping exercise. Newly added items included sugar-sweetened drinks taxes introduced in Ireland and the UK in 2018 <sup>(94)</sup> <sup>(95)</sup>, healthy urban planning and regulation of social media advertising. Two policy items in relation to health

charges were only applicable for (and asked of) residents of the Ireland due to differences in health insurance regulations between jurisdictions.

### Views around people with obesity in society

Survey questions relating to experiences of weight stigma and weight-based discrimination were adapted mainly from the “Perceived Weight Discrimination Scale” (96) and the “Experience of Weight-Based Discrimination Scale” (97). Individual questions were also adapted from large-scale UK population surveys, including the 2015 “British Social Attitudes Survey” (98) and from a report from the “All-Party Parliamentary Group on Obesity” inquiry published in 2018 (99). Additional questions were derived from suggestions made by the PPI consultation group and the research team.

Ethical approval was granted by University College Dublin (UCD) Health Research Ethics Committee and, following this, a supplementary approval was given by Queen’s University Belfast (QUB).

### Recruitment and data collection

The survey aimed for a 1,000-person quota sample of adults living on the island of Ireland. Quotas were set for each demographic (age, gender, socioeconomic group and so on) in each government area. (The sampling frame is provided in Appendix 5, Tables 14, 15, 16 and 17.) Participants needed to be over the age of 18 and competent (that is, legally able) to consent and were chosen by aiming to meet the quotas in each area. The recruitment and data collection were performed by SMR, who used telephone-based Computer Assisted Personal Interviewing.

Due to the COVID-19 pandemic and the related restrictions in place, amendments had to be made in the conduct of the survey, with face-to-face methods replaced by a telephone approach. The research company, SMR, obtained a sample of telephone numbers, through a fully accredited, third-party sample provider, to approach potential participants. The sample of telephone numbers were geo-tagged by county with age, gender and socioeconomic data to support quota sampling. The mixed, “dual-frame” (mobile and landline numbers) approach was designed to reduce data bias, increase the response rate and reach a larger audience. Overall, 10,000 telephone records were procured to achieve a target sample of 1,000 interviews.

Data collection was conducted between 21 October and 26 November 2020 by a team of 15 interviewers, all of whom were comprehensively briefed in advance.

In the preamble (the introduction) of the telephone interview participants were asked to provide consent after receiving information about the study conduct. Each telephone interview was recorded, including spoken consent of the respondent. Names were not collected during the interview, only an identifier that matched the respondent to the data record and telephone number. The interview recording, the identifier and telephone number were kept for 90 days, after which they were destroyed.

### **Statistical analysis**

Data handling involved data transformation, such as income into socioeconomic group, age into age groups, and self-reported height and weight into BMI. The data were weighted (adjusted and balanced) to represent the population of the island of Ireland in terms of age, gender and social class. The 2011 census data for Northern Ireland and Ireland were used to calculate the weight variable and updated based on the later mid-year estimates when possible (100) (101)

For most items on “Views about obesity”, “Views of policy interventions” and “Views around people with obesity in society”, answers were scored on a 5-point Likert scale from “Strongly disagree” to “Strongly agree”. A sixth option of “Don’t know” was also given. Levels of agreement with policies or statements were calculated by obtaining the sum of proportions of respondents who selected “Strongly agree” and “Agree”.

“Multivariate binary regression models” were used to examine the relationship between demographic-anthropometric factors (data around people’s social and economic situation and data relating to body measurements) and support for the obesity-related policy measures. This approach allowed for determining the effect of each factor on policy support, whilst accounting for the other covariates (the characteristics of individuals or population groups) in the model. Acceptability of policy interventions were treated as binary variables (which have only 2 values, for example “Yes or no” or “True or false”) and were used as outcome measures in the regression models. Specifically, the options of “Agree” and “Strongly agree” were treated as a single value, whereas all other options (“Strongly disagree”, “Disagree”, “Neither agree or disagree” and “Don’t know”) were treated as the second value. Five “predictor” variables were included in each regression model: “Gender” (Male / Female); “Age” (Below 55 years / 55 and above); “Educational attainment” (University degree / No university degree); “Location of residence” (Northern Ireland/ Ireland); and “Weight status” (“Healthy weight” defined as BMI below 25.0 kg/m<sup>2</sup> / “Overweight” defined as BMI greater than 25.0 kg/m<sup>2</sup> and less than 30.0 kg/m<sup>2</sup> / “Obesity” defined as BMI equal to or greater than 30.0 kg/m<sup>2</sup> / “Non-responders”, people who did not respond to the height or weight question).

Multivariate binary logistic regression models were also used to assess the effect of different demographic characteristics on participants' views around people living with obesity and on experiences of weight-based discrimination. Items that could be answered with "Very often / Fairly often / Sometimes / Rarely / Never" were recoded into binary variables with "Very often", "Fairly often" and "Sometimes" as a single value and all other responses ("Rarely", "Never") as the second value. Similarly, items with responses taking the form of "Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree / Don't know" were divided into "Strongly agree" and "Agree" as a single value and all other responses ("Neither agree nor disagree", "Disagree", "Strongly disagree" and "Don't know") as the second value.

All analyses were conducted on weighted data using the statistical software package IBM® SPSS® Statistics version 26 (International Business Machines Corporation [IBM], Armonk, New York, United States of America [USA]). Probability, or "*p*" values, of less than 0.05 were considered statistically significant. ("*P*" is a measure of the probability that a finding is true, even if it seems unlikely, rather than occurring by chance or accident.)

### **Qualitative focus groups**

The qualitative component of this study collected data through focus groups with adults living in Northern Ireland and Ireland (different participants from those who took part in the quantitative survey). Given the restrictions put in place to control the spread of COVID-19, data collection took place online, as opposed to face-to-face as initially planned.

### **Recruitment**

As for the initial protocol (that is, the system and set of rules) for face-to-face data collection, target sample size was established at 56 participants, which would include 7 focus groups with 8 participants per group. In the methodology for focus group recruitment, however, to optimise participant input and interaction in an online environment, the sample frame was set at 6 per group. To achieve the same overall sample, 2 additional focus groups were then added, bringing the total number of focus groups to 9. The 2 additional focus groups, 1 with participants from Belfast and 1 with participants from Dublin, served as pilots to test the functions of the web-conferencing platform in the online environment. Recruitment was conducted in line with a suitable, pre-planned and agreed profile (see Table 1).

Ethical approval was granted by UCD Health Research Ethics Committee and, following this, a supplementary approval was given by QUB.

Specific eligibility criteria were applied for certain focus groups, as shown in Table 1. The characteristics taken into consideration to establish eligibility for focus groups included

- Being a competent adult over 18 years of age (for all focus groups)
- Either having children (below 18 years of age) living at home or not (only for 3 focus groups; all other groups were a mix of those with and without children)
- Socioeconomic status as gauged by employment status and job description (2 focus groups with participants of higher socioeconomic status; 3 focus groups with participants of lower socioeconomic status; all other groups with a mix of those with lower and higher socioeconomic status)
- Urban or rural residency (4 focus groups included participants living in a rural location and 5 included those in an urban location)

Both males and females were eligible to take part in the focus groups but recruitment aimed for an equal split for every focus group. Participants included people from across the weight spectrum (through natural distribution and not sampled specifically for this characteristic) and, as such, many would have first-hand experience of living with excess weight, though not all.

**Table 1: Final achieved focus group sample characteristics (9 groups, *N* = 54 participants) in a qualitative study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland**

<b>Ireland</b>	<b>Location</b>	<b>Gender</b>	<b>Socioeconomic status</b>	<b>Dependents</b>	<b>Took place on</b>	<b>Number of participants</b>
<b>Group 1 (pilot)</b>	Urban	Mixed	Mixed	Mixed	24 / 02 / 2021	6
<b>Group 2</b>	Rural	Mixed	Mixed	Mixed	22 / 03 / 2021	6
<b>Group 3</b>	Urban	Mixed	ABC1	Mixed	23 / 03 / 2021	6
<b>Group 4</b>	Rural	Mixed	C2DE	With dependents	24 / 03 / 2021	6
<b>Group 5</b>	Urban	Mixed	C2DE	With dependents	25 / 03 / 2021	6
<b>Northern Ireland</b>	<b>Location</b>	<b>Gender</b>	<b>Socioeconomic status</b>	<b>Dependents</b>	<b>Took place on</b>	<b>Number of participants</b>
<b>Group 6 (pilot)</b>	Urban	Mixed	Mixed	Mixed	23 / 03 / 2021	6
<b>Group 7</b>	Rural	Mixed	C2DE	Mixed	15 / 03 / 2021	6
<b>Group 8</b>	Rural	Mixed	Mixed	Mixed	16 / 03 / 2021	6
<b>Group 9</b>	Urban	Mixed	ABC1	With dependents	18 / 03 / 2021	6

For the pilot groups, the call for participation was circulated by email through all university staff communications and was posted on QUB and UCD social media accounts. This process was aided by a recruitment poster. Interested individuals got in touch with the research team, who assessed their eligibility to participate using a screening questionnaire. The questionnaire captured important demographic information to ensure adequate sample characterisation. It also contained a unique participant identification code that ensured that data processed and analysed contained no identifiable information. The participants that

attended the remaining 7 focus groups were recruited by SMR, who recruited by telephone drawing from their panel or a telephone sample coming from an accredited provider. Upon identifying individuals who were interested in taking part in the study, SMR collected their demographic information through the screening questionnaire and sent the information to the research team through a safe transfer method. The screening questionnaire is provided in Appendix 6.

All eligible individuals received a Participant Information Sheet with information about the purpose and conduct of the study. They were also invited to complete an online consent form. Only individuals who completed the consent form were then emailed a link to access the online focus group. The process whereby participants are screened, give informed consent and are invited to the online focus group is shown in Appendix 7, Figure 5.

### **Data collection**

All focus groups took place between 23 February and 25 March 2021. The web-conferencing software Zoom™ was selected as a user-friendly and safe online platform for the purpose of focus groups. The discussions were only audio-recorded, rather than video-recorded, to preserve confidentiality and anonymity of the discussions. Members of the research team who facilitated the focus groups held expertise in utilising online platforms for research and held experience in qualitative data collection methods and analysis.

The purpose of the focus groups was to understand people's attitudes towards obesity and assess public acceptability of policies to address obesity in both Ireland and Northern Ireland. A focus group topic guide was developed based on research objectives, the literature review, the map of existing policies on the island of Ireland and emergent findings from the quantitative survey. The final topic guide and the Microsoft® PowerPoint® slides (Microsoft Corporation, Redmond, Washington, USA) that were shared with the participants during the focus group are in Appendix 8.

### **Data analysis**

Data analysis was performed by the focus groups facilitators. Audio recordings were provided through safe transfer to a professional service for transcribing verbatim (word for word). The transcripts were read repeatedly by the researchers to allow immersion (deep-level absorption and understanding of detail) in the data. All transcripts were imported and coded in NVivo® 12 Pro software (QSR International Pty Ltd, Doncaster, Victoria, Australia). Researchers shared the transcripts and independently coded them for statistical analysis. During this process, "triangulation" meetings were arranged in regular intervals to ensure that the researchers employed a similar coding approach (Eleni Spyreli, Aoibhin Kelly and Dr Laura McGowan).

Following this, researchers swapped transcripts and coded them. This ensured that all transcripts were double-coded. Discrepancies between assigned codes or coding styles were minor and were easily resolved through discussion. Final codes were then grouped together based on similarities and differences forming a set of preliminary themes also discussed in a process of triangulation. Codes that could not be assigned to any groups were not included. The research team considered the original research question and the structure of the quantitative survey when structuring final themes and their subthemes.



# 5 Results

## Quantitative survey

### Sample demographics

A total of 1,049 individuals participated in the survey, of whom 327 resided in Northern Ireland and 722 in Ireland (30.7 per cent and 69.3 per cent of the overall sample, respectively). The mean age of respondents was 46 years. (The amount of variation from the mean, called “standard deviation” or “SD”, was 17.1; the range of age values was 18 to 99 years). Just under a third of the respondents completed secondary education (28 per cent) and 25 per cent had a university degree (including postgraduate). One in five respondents reported that they find it “Difficult” or “Very difficult” to cope financially (13 per cent and 8 per cent, respectively). A third of the sample reported living with overweight or obesity (33 per cent) and 9 per cent had received some type of medical treatment for their weight (medicine, counselling or surgery). The majority perceived their overall health to be “Good” or “Very good” (35 per cent and 36 per cent, respectively). More information on participants’ demographic profile can be found in Table 2. (A breakdown of participants in the sampling frame by local authority area can be found in Appendix 5, Tables 14, 15, 16 and 17.)

**Table 2: Demographic characteristics of participants ( $N = 1,049$ ) in a quantitative survey to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland**

Variable (demographic characteristic)	Category	Number of participants	Percentage of sample (%)
Age	18 to 29 years	227	21.6
-	30 to 49 years	371	35.4
-	50 to 64 years	261	24.9
-	65 years and above	190	18.1
Gender	Male	497	47.4
-	Female	549	52.3
-	Non-binary	3	0.3
Relationship status <sup>1</sup>	Married or cohabiting	601	57.2

Variable (demographic characteristic)	Category	Number of participants	Percentage of sample (%)
-	Not married or cohabiting	417	39.8
-	Unknown	31	3.0
<b>Nationality</b>	<b>British</b>	<b>145</b>	<b>13.8</b>
-	Northern Irish	98	9.3
-	Irish	780	74.4
-	Other UK	10	1.0
-	Other	16	1.5
<b>Children under 18 years living at home</b>	<b>Yes <sup>2</sup></b>	<b>438</b>	<b>41.8</b>
-	No	611	58.2
<b>Socioeconomic status</b>	<b>Higher managerial, administrative, professional occupations</b>	<b>57</b>	<b>5.4</b>
-	Intermediate managerial, administrative, professional occupations	172	16.4
-	Supervisory, clerical and junior managerial, administrative, professional occupations	269	25.6
-	Skilled manual occupations	207	19.7
-	Semi-skilled or unskilled manual occupations	96	9.2
-	State pensioner, unemployed with state benefits only and lowest grade occupations	184	17.5
-	Unknown	64	6.2
<b>Education</b>	<b>Below secondary education level</b>	<b>194</b>	<b>18.5</b>
-	Second level	292	27.8
-	Certificate / Diploma / Vocational	304	28.9
-	Degree / Postgraduate	255	24.4
-	Unknown	4	0.4
<b>Income</b>	<b>Very comfortable</b>	<b>59</b>	<b>5.6</b>
-	Comfortable	328	31.3
-	Coping	366	34.9
-	Difficult	134	12.8
<b>Income</b>	<b>Very difficult</b>	<b>84</b>	<b>8.0</b>

Variable (demographic characteristic)	Category	Number of participants	Percentage of sample (%)
-	Prefer not to say	78	7.4
Medical coverage Ireland <sup>3</sup>	Medical Card	175	16.7
-	GP Visit card	54	5.1
-	Private insurance	362	34.5
-	None	142	13.5
-	Prefer not to say	26	2.6
Medical coverage Northern Ireland	Private medical insurance	58	5.5
-	Not privately insured	269	25.6
Self-reported Body Mass Index (BMI) <sup>4</sup>	Underweight (BMI below 18.5 kg/m <sup>2</sup> )	15	1.4
-	Healthy weight (BMI 18.5 to 24.9 kg/m <sup>2</sup> )	357	34.0
-	Living with overweight (BMI 25.0 to 29.9 kg/m <sup>2</sup> )	223	21.3
-	Living with obesity (BMI 30.0 kg/m <sup>2</sup> and above)	127	12.1
-	Unknown	327	31.2
Previous treatment for weight issues	Yes	91	8.7
-	No	958	91.3
Overall health	Very bad	12	1.1
-	Bad	71	6.8
-	Fair	222	21.2
-	Good	362	34.5
-	Very good	382	36.4

<sup>1</sup> This can be further broken down to: Single: N=300 (28.6%); Married: N=518 (49.4%); Civil partnership: N=8 (0.8%); Divorced: N=32 (3.1%); Domestic partnership: N=75 (7.1%); Separated: N=32 (3.1%); Widowed: N=53 (5.1%); Unknown: N=31 (3%)

<sup>2</sup> This can be further broken down to: 1 child: N=158 (15.1%); 2 children: N=183 (17.4%); 3 children: N=72 (6.9%); 4 children or more: N=25 (2.4%)

<sup>3</sup> The overall number of respondents are above total, as some reported two types of medical coverage

<sup>4</sup> If missing values are not considered, BMI categories are as follows: underweight: 2.1%; healthy weight: 49.4%; living with overweight: 30.9%; living with obesity: 17.6%

### **Public acceptability of policy interventions to address obesity**

The 37 obesity-related policies were divided into 4 distinct groups:

- **Child-focussed policies:** This group gathers all child-related measures, including banning vending machines in schools and regulation of the nutritional content of school meals.
- **Informational interventions:** All informational and promotional measures aimed at the general population (that is, not child-focussed) are brought together in this group, including information campaigns, education and training measures and food labelling policies.
- **Fiscal measures:** This group brings together taxes on unhealthy foods, VAT measures and subsidies for healthy foods.
- **Industry regulation measures:** This group gathers regulatory measures relating to businesses, such as restrictions on portion size in restaurants, health insurance price reductions for normal weight individuals and banning special offers on high-sugar and high-fat foods.

The level of agreement with the policies in each group is displayed in Tables 3, 4, 5 and 6. Policies are presented from the most supported to the least supported. Findings are also reported separately for NI and the ROI in Appendix 9, Table 18.

Overall, survey findings showed majority support (that is, from more than 50 per cent of respondents) for all policies to address obesity ( $n = 37$ ), except 2:

- “There should be an additional health charge for those presenting with obesity” (40 per cent agreement)
- “Portion sizes in restaurants and fast-food shops should be restricted” (47 per cent agreement)

Child-focussed policies were most popular with the public. The highest levels of support were reported for healthy primary school meals (92 per cent) and for practical education of food preparation at schools (92 per cent). These were followed by education on healthy eating at school (91 per cent), healthy meals in secondary schools (91 per cent) and improved exercise and playground facilities (90 per cent).

When asked about information interventions respondents showed high levels of agreement with campaigns on the risks of unhealthy eating (84 per cent), calorie and nutritional

labelling on food products (83 per cent) and calorie and nutritional labelling in restaurant menus (78 per cent).

A number of fiscal measures also received high support ratings, such as price reductions for healthy foods (for example fruit and vegetables) (84 per cent), tax increases for unhealthier foods (80 per cent) and vouchers for healthier foods for low-income families (76 per cent).

Finally, high levels of support were also evident for some industry- and regulation-led policies, including healthy meals for hospital staff and visitors (91 per cent), healthy meals in workplaces (89 per cent) and collaboration between government and food companies for healthier processed foods (89 per cent).

**Table 3: Support for child-related policies in Ireland and Northern Ireland in a quantitative survey to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland (N= 1,049)**

<b>Statement</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Neither agree nor disagree</b>	<b>Disagree</b>	<b>Strongly disagree</b>	<b>Don't know</b>	<b>Overall agreement <sup>1</sup></b>
The Government should make sure that primary school meals meet a healthy standard of nutrition.	49.9%	41.9%	3.3%	1.7%	0.5%	2.7%	<b>91.8%</b>
Practical education in food preparation should be taught in all schools.	45.2%	46.5%	3.3%	1.3%	0.5%	3.2%	<b>91.7%</b>
Education to promote healthy eating should be provided in all schools.	43.8%	47.6%	4.5%	1.5%	0.4%	2.2%	<b>91.4%</b>
The Government should make sure that secondary school meals meet a healthy standard of nutrition.	49.3%	41.3%	3.5%	1.0%	0.7%	4.2%	<b>90.6%</b>
The Government should provide resources to improve exercise and playground facilities.	44.4%	45.7%	5.8%	1.7%	0.2%	2.1%	<b>90.1%</b>
Children should have to participate in a minimum of 30-minute exercise a day while at school.	51.3%	34%	8.6%	3.9%	0.3%	1.9%	<b>85.3%</b>
The Government should restrict advertising for unhealthy food that is aimed at children on the Internet.	30.7%	50.0%	8.2%	6.2%	1.6%	3.2%	<b>80.7%</b>
The Government should ban advertising for unhealthy food that is aimed at children.	31.1%	49.1%	10.8%	5.3%	0.8%	2.9%	<b>80.2%</b>
Vending machines selling unhealthy food should be banned from our schools (including secondary schools).	32.9%	44.9%	9.4%	6.8%	1.5%	4.4%	<b>77.8%</b>
The Government should provide resources to encourage women to breastfeed.	25.4%	47.3%	21.5%	2.9%	1.3%	1.6%	<b>72.7%</b>

<b>Statement</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Neither agree nor disagree</b>	<b>Disagree</b>	<b>Strongly disagree</b>	<b>Don't know</b>	<b>Overall agreement <sup>1</sup></b>
There should be planning regulations to restrict the development of fast-food outlets in areas near to schools.	21.5%	45.0%	17.8%	12.8%	0.7%	2.2%	<b>66.5%</b>
The Government should ban companies that make unhealthy foods and drinks from sponsoring children's organisations, children's events and children's sporting teams.	19.1%	46.4%	17.9%	11.3%	1.9%	3.4%	<b>65.5%</b>
Children's height and weight should be routinely measured to monitor rates of growth in the population.	26.2%	37.1%	19.4%	11.1%	3.7%	2.6%	<b>63.3%</b>

<sup>1</sup> Calculated by summing the proportion of respondents that answered "Agree" or "Strongly agree".

**Table 4: Support for informational policies in Ireland and Northern Ireland in a quantitative survey to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland (N= 1,049)**

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Overall agreement <sup>1</sup>
The Government should spend money on effective campaigns informing people about the risks of unhealthy eating.	31.7%	52.0%	9.5%	3.1%	0.9%	2.8%	<b>83.7%</b>
All foods should be required to carry labels with calorie and nutrient information.	30.4%	52.6%	11.1%	1.4%	0.7%	3.8%	<b>83.0%</b>
All restaurants should be required to provide calorie and nutrient information in menus.	28.5%	49.5%	13.4%	5.1%	1.4%	2.1%	<b>78.0%</b>
The Government should reward companies for healthy food innovations.	22.5%	52.6%	15.3%	7.0%	0.8%	1.7%	<b>75.1%</b>
The Government should subsidise businesses which provide programmes to support their employees in healthy eating.	26.3%	47.4%	13.7%	7.3%	2.1%	3.2%	<b>73.7%</b>
Television stations should give free air-time to governmental campaigns that promote healthier eating.	19.5%	50.6%	18.8%	6.2%	1.4%	3.5%	<b>70.1%</b>

<sup>1</sup> Calculated by summing the proportion of respondents that answered “Agree” or “Strongly agree”.



**Table 5: Support for fiscal policies in Ireland and Northern Ireland in a quantitative survey to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland (N= 1,049)**

<b>Statement</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Neither agree nor disagree</b>	<b>Disagree</b>	<b>Strongly disagree</b>	<b>Don't know</b>	<b>Overall agreement <sup>1</sup></b>
The Government should subsidise (make cheaper) fruit and vegetables to promote healthier eating.	35.9%	47.6%	8.5%	3.6%	1.1%	3.3%	<b>83.5%</b>
VAT (value added tax) rates should be lower for healthy foods and higher for unhealthy foods.	26.1%	54.2%	12.5%	3.5%	1.5%	2.2%	<b>80.3%</b>
The Government should provide vouchers to low-income families to buy healthy foods at reduced prices.	28.7%	47.2%	10.4%	6.2%	1.9%	5.6%	<b>75.9%</b>
There should be a tax incentive to encourage sports participation, with a tax break for the purchase of sports equipment.	31.0%	43.4%	15.9%	5.3%	1.6%	2.8%	<b>74.4%</b>
The Government should extend the Sugar Sweetened Drinks Tax to include all sugary foods to promote healthier eating.	17.0%	51.3%	15.0%	9.5%	3.2%	3.9%	<b>68.3%</b>
The Government should impose taxes on unhealthy foods and use the proceeds to promote healthier eating.	20.6%	46.9%	12.6%	10.0%	2.7%	7.1%	<b>67.5%</b>
There should be an additional health charge for those presenting with obesity. <sup>2</sup>	11.0%	28.6%	22.4%	26.1%	8.9%	3.0%	<b>39.6%</b>

<sup>1</sup> Calculated by summing the proportion of respondents that answered “Agree” or “Strongly agree”. <sup>2</sup> These policies are only relevant to Ireland.

**Table 6: Support for industry-led regulation policies in Ireland and Northern Ireland in a quantitative survey to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland (N= 1,049)**

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Overall agreement <sup>1</sup>
The Government should make sure that meals available in hospitals to staff and visitors meet a healthy standard of nutrition.	50.4%	40.5%	4.0%	0.9%	0.3%	3.8%	<b>90.9%</b>
The Government should make sure that meals sold or provided at workplaces meet a healthy standard of nutrition.	46.3%	42.5%	4.9%	3.2%	0.3%	2.8%	<b>88.8%</b>
The Government should work with the food companies to improve the nutritional content of processed foods (for example less salt or fats).	47.0%	41.7%	5.1%	1.1%	0.3%	4.8%	<b>88.7%</b>
The Government should try to make towns and cities such that people are encouraged to be more active and healthier (such as bike lanes, parks, pedestrian areas).	39.9%	41.1%	12.9%	1.4%	1.4%	3.3%	<b>81.0%</b>
The Government should impose limits on certain ingredients (for example salt or fats) on food companies to improve the nutritional content of processed foods.	18.8%	60.1%	12.3%	4.1%	1.9%	2.7%	<b>78.9%</b>
There should be public measures like free home delivery to support easier access to healthy foods for the elderly and those with lower incomes.	19.9%	57.7%	13.3%	4.6%	1.5%	3.0%	<b>77.6%</b>
The food industry should help pay for governmental campaigns that promote healthy eating.	25.3%	47.6%	16.4%	5.4%	1.5%	3.7%	<b>72.9%</b>

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Overall agreement <sup>1</sup>
The Government should ban advertising for unhealthy foods that is aimed at adults.	24.2%	45.2%	18.5%	9.2%	1.6%	1.3%	<b>69.4%</b>
The Government should restrict advertising for unhealthy food in public spaces (for examples bus stops, trains stations, hospitals, roadside).	22.2%	46.6%	14.0%	12.7%	2.1%	2.4%	<b>68.8%</b>
There should be a ban on sales promotion and special offers on unhealthy foods.	19.2%	42.2%	14.5%	17.7%	3.4%	2.9%	<b>61.4%</b>
There should be health insurance price reductions for those of healthy weight. <sup>2</sup>	22.0%	38.5%	18.8%	14.9%	3.4%	2.4%	<b>60.5%</b>
There should be planning regulations to restrict the development of certain food outlets (selling foods high in saturated fats) in towns and cities.	19.4%	41%	18.4%	16.4%	1.6%	3.1%	<b>60.4%</b>
Portion sizes in restaurants and fast-food shops should be restricted.	13.4%	33.9%	17.9%	24.1%	8.4%	2.2%	<b>47.3%</b>

<sup>1</sup> Calculated by summing the proportion of respondents that answered “Agree” or “Strongly agree”.

<sup>2</sup> These policies are only relevant to Ireland.

## Demographics and policy support

Multivariate binary logistic regression models were used to examine the effect of demographic characteristics (age, gender, educational attainment, location of residence and weight status) on attitudes towards policy measures to address obesity across the island of Ireland.

### Gender

When compared with men, women were significantly more likely to express agreement with healthy meals in primary schools (odds ratio or “OR” = 2.04; 95 per cent confidence interval or “CI” = 1.27 to 3.27;  $p = 0.003$ ) and secondary schools (OR = 1.60, 95 per cent CI = 1.04 to 2.47;  $p = 0.032$ ); and more resources to encourage breastfeeding (OR = 1.80; 95 per cent CI = 1.34 to 2.40;  $p$  less than 0.001). (The “odds ratio” is a statistic that quantifies the relationship between 2 events. The “confidence interval” is a range of estimates for an unknown parameter that is calculated at a specific “confidence level”, usually set at 95 per cent; a “parameter” is any measurement of the statistical population that has been used to describe an aspect of the group, such as the mean value or the standard deviation from the mean.)

### Age

Older respondents (from 55 years and upwards) generally reported higher levels of support towards obesity-related policies compared with younger participants (aged 18 to 54 years). Statistically significant higher support was shown for banning unhealthy food advertising targetting children in general (OR = 2.17; 95 per cent CI = 1.51 to 3.10;  $p$  less than 0.001) and on the Internet (OR = 1.58; 95 per cent CI = 1.11 to 2.25;  $p = 0.011$ ), as well as targetting adults (OR = 1.44; 95 per cent CI = 1.07 to 1.93;  $p = 0.015$ ), calorie and nutritional labelling on foods (OR = 1.78; 95 per cent CI = 1.23 to 2.59;  $p = 0.002$ ) and on restaurant menus (OR = 1.51; 95 per cent CI = 1.09 to 2.10;  $p = 0.014$ ), restrictions on the development of fast-food outlets near schools (OR = 1.76; 95 per cent CI = 1.31 to 2.36;  $p$  less than 0.001) and in towns and cities (OR = 1.72; 95 per cent CI = 1.29 to 2.28;  $p = 0.001$ ).

Older respondents were also more likely to support children’s obligatory participation in exercise at school (OR = 1.67; 95 per cent CI = 1.13 to 2.46;  $p = 0.010$ ), a ban on special offers on unhealthy foods (OR = 1.55; 95 per cent CI = 1.17 to 2.05;  $p = 0.002$ ) and government rewards to companies for healthy food innovations (OR = 1.67; 95 per cent CI = 1.14 to 2.14;  $p = 0.005$ ).

### Education

Respondents who held a university degree were more likely to support certain measures when compared with those without university education. Significant differences were seen in levels

of support for healthy meals being provided at schools (OR = 2.46; 95 per cent CI = 1.18 to 5.11;  $p = 0.016$ ) and at workplaces (OR = 2.08; 95 per cent CI = 1.17 to 3.69;  $p = 0.012$ ), education on healthy eating at schools (OR = 2.16; 95 per cent CI = 1.10 to 4.23;  $p = 0.025$ ) and government-funded educational campaigns on the risks of unhealthy eating (OR = 1.61; 95 per cent CI = 1.06 to 2.23;  $p = 0.041$ ). Responders with a university degree were also more likely to support children taking part in exercise at school (OR = 2.98; 95 per cent CI = 1.68 to 5.29;  $p$  less than 0.001), restrictions in development of fast-food outlets in school areas (OR = 1.68; 95 per cent CI = 1.18 to 2.38;  $p = 0.004$ ), calorie and nutritional labelling in foods (OR = 1.73; 95 per cent CI = 1.10 to 2.73;  $p = 0.018$ ), government rewards to companies for healthy food innovations (OR = 1.67; 95 per cent CI = 1.11 to 2.14;  $p = 0.010$ ) and extension of sugar-sweetened drinks taxes to include all sugary foods (OR = 1.54; 95 per cent CI = 1.09 to 2.20;  $p = 0.016$ ).

### Residential location

Several measures to address obesity were more supported by participants living in Northern Ireland as opposed to Ireland. Specifically, respondents in Northern Ireland were significantly more likely to agree with

- Better resources for women who want to breastfeed (OR = 3.15; 95 per cent CI = 2.20 to 4.50;  $p$  less than 0.001). The overall level of agreement in Northern Ireland was 86 per cent as against 67 per cent in Ireland.
- A ban on unhealthy food advertising to adults (OR = 2.10; 95 per cent CI = 1.54 to 2.88;  $p$  less than 0.001). The overall level of agreement in Northern Ireland was 79 per cent as against 65 per cent in Ireland.
- Restrictions on development of fast-food outlets near schools (OR = 3.09; 95 per cent CI = 2.23 to 4.28;  $p$  less than 0.001). The overall level of agreement in Northern Ireland was 81 per cent as against 60 per cent in Ireland.
- Restrictions on development of fast-food outlets in towns and cities (OR = 3.33; 95 per cent CI = 2.44 to 4.53;  $p$  less than 0.001). The overall level of agreement in Northern Ireland was 77 per cent as against 53 per cent in Ireland.
- Restrictions on restaurant portion sizes (OR = 2.23; 95 per cent CI = 1.69 to 2.95;  $p$  less than 0.001). The overall level of agreement in Northern Ireland was 60 per cent as against 42 per cent in Ireland.
- Improving urban environments to encourage people to be more active (OR = 2.94; 95 per cent CI = 1.93 to 4.47;  $p$  less than 0.001). The overall level of agreement in Northern Ireland was 91 per cent as against 77 per cent in Ireland.

Additional differences in policy support between respondents in Northern Ireland and Ireland are for provision of healthy meals in primary schools (OR = 2.67; 95 per cent CI = 1.46 to 4.88;  $p = 0.001$ ), education on healthy eating (OR = 2.24; 95 per cent CI = 1.28 to 3.94;  $p = 0.005$ ) and practical education in food preparation at schools (OR = 2.23; 95 per cent CI = 1.26 to 3.94;  $p = 0.006$ ), better resources for exercise and playground facilities (OR = 2.59; 95 per cent CI = 1.50 to 4.47;  $p = 0.001$ ) and calorie and nutritional information on restaurant menus (OR = 2.05; 95 per cent CI = 1.43 to 2.93;  $p$  less than 0.001).

### Weight classification

It is worth noting that 31 per cent of survey respondents did not provide sufficient anthropometric measurements to allow calculation of their weight status using BMI. Due to the high number of missing values for weight status, in this regression model the missing values for BMI were included as a separate value for the variable of “weight status”.

Therefore, comparisons were drawn between people of healthy weight (BMI below 25 kg/m<sup>2</sup>), with people who lived with overweight (BMI between 25 kg/m<sup>2</sup> and 30.0 kg/m<sup>2</sup>), with people who lived with obesity (BMI 30 kg/m<sup>2</sup> and above) and with people who did not provide anthropometric measurements (non-responders).

No differences were observed in policy support between people living with overweight when compared with those of healthy weight.

Differences in policy support *were* found between respondents of healthy weight and those living with obesity. Specifically, the latter were less likely to support taxations on unhealthy foods (OR = 0.52; 95 per cent CI = 0.34 to 0.80;  $p = 0.003$ ), limiting ingredients such as salt or fat in processed foods (OR = 0.45; 95 per cent CI = 0.28 to 0.74;  $p = 0.002$ ), restrictions on restaurant portion sizes (OR = 0.56; 95 per cent CI = 0.36 to 0.87;  $p = 0.010$ ) and the extension of sugar-sweetened drinks taxes to include all sugary foods (OR = 0.62; 95 per cent CI = 0.40 to 0.97;  $p = 0.035$ ). Specifically, in Ireland people with obesity showed lower levels of support for additional health charges for people presenting with obesity (OR = 0.41; 95 per cent CI = 0.23 to 0.75;  $p = 0.003$ ) and health insurance price reductions for those of healthy weight (OR = 0.57; 95 per cent CI = 0.33 to 0.96;  $p = 0.036$ ), when compared with people living with a healthy weight. On the other hand, respondents living with obesity were more likely to agree with vouchers for healthy foods to low-income families (OR = 2.04; 95 per cent CI = 1.21 to 3.46;  $p = 0.008$ ).

Analysis showed differences in policy support between people who provided height and weight and were of healthy weight and people who did not provide a response for height or weight. Non-responders were less likely to show support for government subsidies of fruit

and vegetables (OR = 0.56; 95 per cent CI = 0.38 to 0.83;  $p = 0.004$ ), government-funded educational campaigns on the risks of unhealthy eating (OR = 0.52; 95 per cent CI = 0.35 to 0.77;  $p = 0.001$ ), nutritional labelling on foods (OR = 0.59; 95 per cent CI = 0.40 to 0.88;  $p = 0.009$ ) and on restaurant menus (OR = 0.64; 95 per cent CI = 0.44 to 0.92;  $p = 0.016$ ) and resources to improve exercise and playground facilities (OR = 0.35; 95 per cent CI = 0.21 to 0.59;  $p$  less than 0.001) in comparison with people living with a healthy weight. Additionally, non-responders were likely to express support for healthy meals in primary schools (OR = 0.30; 95 per cent CI = 0.17 to 0.52;  $p$  less than 0.001) and in secondary schools (OR = 0.42; 95 per cent CI = 0.26 to 0.69;  $p$  less than 0.001), education to promote healthy eating (OR = 0.35; 95 per cent CI = 0.21 to 0.61;  $p$  less than 0.001) and for food preparation at schools (OR = 0.33; 95 per cent CI = 0.19 to 0.56;  $p$  less than 0.001) and compulsory participation in exercise by children at school (OR = 0.48; 95 per cent CI = 0.31 to 0.74;  $p = 0.001$ ).

### Views about obesity

When asked how serious a condition obesity is for today's society compared with other health conditions, the majority of respondents perceived it as "More serious" or "Much more serious" (34 per cent and 13 per cent respectively), whereas 10 per cent described it as "Less serious". A total of 43 per cent perceived obesity as "Equally serious" compared with other health conditions. Similar to public acceptability for policy interventions, agreement with each obesity-related statement was measured as a sum of the proportion of respondents who answered "Agree" or "Strongly agree".

Regarding beliefs about obesity, the highest levels of support were reported by respondents for the statements

- "People should maintain a healthy weight for optimal health" (88 per cent of respondents agreed)
- "Losing weight would greatly improve the health of people living with obesity" (87 per cent agreed)
- "A person with a healthy body weight can lead a more active life" (85 per cent agreed)
- "People become overweight because there are too many snack foods readily available in workplaces, shops and homes" (80 per cent agreed)
- "There is too much unhealthy and fatty food in restaurants, supermarkets and convenience stores" (80 per cent agreed)
- "People lack the willpower to diet or exercise regularly" (80 per cent agreed).

The 5 obesity-related beliefs that received the lowest levels of agreement are

- “People become overweight because they are unable to buy healthy food close to their home” (37 per cent of respondents agreed)
- “People become overweight because they are simply born that way” (34 per cent agreed)
- “Being overweight is something you inherit from your parents” (34 per cent agreed)
- “Maintaining a healthy body weight makes life less fun” (32 per cent agreed)
- “Maintaining a healthy body weight is boring” (31 per cent agreed)

Table 7 shows the proportions of the different responses to 36 statements around obesity. Findings are also reported separately for Northern Ireland and Ireland in Appendix 10, Table 19.



**Table 7: Views about obesity by the public in a quantitative survey to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland (N= 1,049)**

Statement <sup>1</sup>	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know or refused to answer	Overall agreement <sup>2</sup>
Being overweight is something you inherit from your parents.	9.1%	24.4%	15.9%	28.0%	13.0%	9.5%	<b>33.5%</b>
There is too much unhealthy and fatty food in restaurants, supermarkets and convenience stores (shops).	30.4%	49.7%	13.1%	4.9%	0.7%	1.2%	<b>80.1%</b>
Most weight-loss diets are not very effective.	13.7%	32.2%	18.3%	24.1%	3.3%	8.3%	<b>45.9%</b>
People lack the willpower to diet or exercise regularly.	24.6%	55.2%	11.3%	4.9%	1.9%	2.0%	<b>79.8%</b>
People become overweight because they spend too much time driving / watching television / on the Internet.	27.5%	51.8%	10.2%	7.7%	1.9%	1.0%	<b>79.3%</b>
People become overweight because they don't have time to prepare healthy meals.	11.7%	46.1%	13.7%	21.1%	5.4%	1.9%	<b>57.8%</b>
People become overweight because they are simply born that way.	8.4%	25.2%	18.4%	28.5%	10.2%	9.4%	<b>33.6%</b>
Most people who become overweight don't view their weight as a problem.	7.7%	38.7%	19.9%	22.3%	3.8%	7.6%	<b>46.4%</b>
People become overweight because they are unable to buy healthy food close to their home.	5.8%	31.5%	15.3%	33.5%	10.6%	3.3%	<b>37.3%</b>
People become overweight because there are too many snack foods readily available in workplaces, shops and homes.	27.2%	53.2%	10.7%	6.6%	1.3%	1.0%	<b>80.4%</b>

<b>Statement <sup>1</sup></b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Neither agree nor disagree</b>	<b>Disagree</b>	<b>Strongly disagree</b>	<b>Don't know or refused to answer</b>	<b>Overall agreement <sup>2</sup></b>
People become overweight because healthy foods are too expensive.	11.1%	35.2%	17.7%	26.2%	8.6%	1.3%	<b>46.3%</b>
People who become overweight eat whatever they want.	31.0%	44.7%	13.1%	6.2%	1.1%	3.9%	<b>75.7%</b>
People become overweight because they don't have time to exercise.	10.6%	43.5%	18.2%	20.7%	4.1%	2.8%	<b>54.1%</b>
People who eat too much unhealthy food do so because it costs much less than healthy food.	10.9%	39.9%	17.4%	22.8%	6.7%	2.4%	<b>50.8%</b>
Most people in society can't afford to eat healthy foods and exercise regularly.	9.8%	34.1%	18.6%	28.2%	6.8%	2.6%	<b>43.9%</b>
People become overweight because they lack information about healthy eating and / or health risks of excess weight.	22.5%	43.3%	13.4%	13.7%	4.7%	2.5%	<b>65.8%</b>
People become overweight because they value more immediate satisfaction compared to future health risks.	30.0%	41.1%	15.8%	5.8%	0.7%	6.6%	<b>71.1%</b>
People have to deny themselves a great deal to avoid obesity.	16.8%	36.0%	18.3%	23.2%	3.2%	2.5%	<b>52.8%</b>
Maintaining a healthy body weight is expensive.	10.9%	34.4%	18.2%	28.8%	5.3%	2.4%	<b>45.3%</b>
People should maintain a healthy weight for optimal health.	36.8%	51.2%	7.1%	2.2%	1.6%	1.2%	<b>88.0%</b>
Maintaining a healthy body weight is boring.	5.5%	25.0%	26.5%	33.3%	5.9%	3.9%	<b>30.5%</b>

<b>Statement <sup>1</sup></b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Neither agree nor disagree</b>	<b>Disagree</b>	<b>Strongly disagree</b>	<b>Don't know or refused to answer</b>	<b>Overall agreement <sup>2</sup></b>
People with obesity would be treated better if they lost weight.	19.6%	44.7%	22.2%	7.1%	1.7%	4.8%	<b>64.3%</b>
Maintaining a healthy body weight takes a lot of effort.	19.9%	49.6%	15.7%	11.0%	1.9%	1.9%	<b>69.5%</b>
A person with a healthy body weight can lead a more active life.	32.9%	51.8%	10.1%	2.0%	1.0%	2.1%	<b>84.7%</b>
Maintaining a healthy body weight makes life less fun.	7.9%	24.2%	23.7%	32.3%	8.4%	3.5%	<b>32.1%</b>
People with overweight or obesity are considered less attractive.	15%	34.2%	22.8%	17.2%	4.0%	6.7%	<b>49.2%</b>
People with obesity need more medical care.	32.2%	44.4%	13.8%	4.1%	1.3%	4.2%	<b>76.6%</b>
People with obesity are embarrassed by the way they look.	12.8%	41.0%	24.1%	10.0%	2.1%	9.9%	<b>53.8%</b>
Losing weight would greatly improve the health of people living with obesity.	36.4%	50.9%	7.9%	2.1%	0.7%	2.0%	<b>87.3%</b>
People with obesity would have a better social life if they lost weight.	22.1%	40.9%	22%	8.4%	2.0%	4.6%	<b>63.0%</b>
A person who avoids obesity has a restricted lifestyle.	10.0%	32.3%	18.6%	24.9%	8.6%	5.7%	<b>42.3%</b>
People with a healthy body weight are taken more seriously.	18.9%	38.9%	23.2%	13.9%	1.3%	3.8%	<b>57.8%</b>
Getting older causes people to become overweight.	20.4%	46.0%	17.5%	9.3%	1.8%	4.9%	<b>66.4%</b>

Statement <sup>1</sup>	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know or refused to answer	Overall agreement <sup>2</sup>
People can be overweight and still be healthy.	10.0%	42.2%	25.5%	16.6%	1.1%	4.7%	<b>52.2%</b>
People who have obesity live shorter lives.	15.4%	39.9%	25.4%	6.3%	1.1%	11.9%	<b>55.3%</b>
Obesity represents a very serious health condition for our society.	18.5%	60.4%	18.2%	1.8%	1.2%	0%	<b>78.9%</b>

<sup>1</sup> Statements based on the *Obesity Beliefs Scale* (Swift and colleagues, 2007)

<sup>2</sup> Calculated by summing the proportion of respondents that answered “Agree” or “Strongly agree”.

## Public perceptions around people with obesity in society

### General views around weight and people with obesity in society

The degree to which the people surveyed felt comfortable talking to various individuals about their weight is displayed in Table 8a. Overall, most respondents in the study sample felt comfortable talking to their family medical doctor or General Practitioner (GP), family members and friends about their weight, shape or size (70.0 per cent, 64.4 per cent and 59.1 per cent, respectively). However, there were significant differences in the characteristics of respondents feeling comfortable talking to their GP about weight. Identifying as male (OR = 0.73; 95 per cent CI = 0.54 to 0.98;  $p = 0.037$ ), having a university degree (OR = 2.49; 95 per cent CI = 1.63 to 3.80;  $p$  less than 0.001) and residing in the ROI (OR = 1.69; 95 per cent CI = 1.24 to 2.29;  $p = 0.001$ ) were associated with feeling comfortable talking to the GP about their weight. Additionally, being in the “Obesity” weight category (BMI 30 kg/m<sup>2</sup> and above) (OR = 0.25; 95 per cent CI = 0.16 to 0.40;  $p$  less than 0.001) or being classed as a non-responder was associated with feeling less comfortable talking to the GP about weight (OR = 0.19; 95 per cent CI = 0.13 to 0.28;  $p$  less than 0.001) when compared with those with a healthy weight or those in the “Overweight” category.

The vast majority of respondents were in favour of people with obesity having the same right as everyone else to receive treatment in the health system (82 per cent). Only 5.8 per cent disagreed that most people with obesity are self-conscious about their weight; most respondents agreed with this statement. Other statements in Table 8a drew more varied views from participants. A quarter of respondents thought that people with obesity cannot be good workers compared with people with a healthy weight, despite the area of work not being specified in the statement. Almost half (47.9 per cent) disagreed with this statement, with 27.7 per cent answering that they “Neither agreed nor disagreed” or “Don’t know”. Older respondents (OR = 1.68; 95 per cent CI = 1.21 to 2.23;  $p$  less than 0.001) were significantly more likely to agree with this statement and those with obesity were less likely to agree compared with those of a healthy weight (OR = 0.41; 95 per cent CI = 0.24- to 0.69;  $p$  less than 0.001). Non-responders (where either no self-reported height or weight was given) were also less likely to agree with this statement (OR = 0.53; 95 per cent CI = 0.37 to 0.77;  $p = 0.001$ ).

With regard to the media promoting negative stereotypes about individuals with obesity, over half of those surveyed agreed that this was the case (56.2 per cent), with respondents residing in the ROI less likely to agree than those in NI (OR = 0.76; 95 per cent CI = 0.58 to 0.99;  $p = 0.046$ ) and those of a healthy weight less likely to agree with this than those with a BMI above 30 kg/m<sup>2</sup> (OR = 1.74; 95 per cent CI = 1.13 to 2.69;  $p = 0.013$ ). A slightly lower number (52.4

per cent) said that they would support advertisements that purposely include people with obesity; 14.8 per cent were opposed to this idea, with a third of all respondents saying that they “Neither agree nor disagree” or “Don’t know”. Having a university degree (OR = 1.66; 95 per cent CI = 1.21 to 2.28;  $p = 0.002$ ) and being resident in the ROI (OR = 1.48; 95 per cent CI = 1.13 to 1.93;  $p = 0.005$ ) were associated with support for such advertisements. Findings are also reported separately for NI and the ROI in Appendix 11, Tables 20 and 21.

**Table 8a: Views of the public around weight and people with obesity in a quantitative survey to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland (N= 1,049)**

<b>Statement <sup>1</sup></b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Neither agree nor disagree</b>	<b>Disagree</b>	<b>Strongly disagree</b>	<b>Don't know</b>
You feel comfortable talking about your weight, shape or size to your GP.	23.4%	46.6%	14.5%	11.5%	2.5%	1.5%
You feel comfortable talking about your weight, shape or size to your family.	23.2%	41.3%	16.5%	14.9%	1.9%	2.2%
You feel comfortable talking about your weight, shape or size to your friends.	21.7%	37.4%	18.6%	16.6%	2.6%	3.1%
People with obesity should have the same right as everyone else to receive treatment in the health system.	27.1%	54.9%	12.7%	3.7%	0.1%	1.6%
Most people with obesity are self-conscious about their weight.	15.0%	51.1%	25.4%	4.8%	1.0%	2.7%
People with obesity cannot be good workers compared to people with a healthy weight.	4.5%	19.9%	26.1%	31.8%	16.1%	1.6%

Statement <sup>1</sup>	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know
I think the media promotes negative stereotypes about people with obesity.	14.7%	41.5%	27.8%	12.4%	0.4%	3.1%
I support advertisements purposely including people with obesity.	13.0%	39.4%	30.7%	13.8%	1.0%	2.1%

<sup>1</sup> Statements adapted from the *Perceived Weight Discrimination Scale* (Hatzenbuehler and colleagues, 2009) and the *Experience of Weight-Based Discrimination Scale* (Farrow and Tarrant, 2009).



## Personal experiences of weight-based discrimination and weight stigma

One in ten adults in the present survey (10.4 per cent) felt that they had experienced discrimination based on their weight on at least 1 occasion (Table 8b). Two-thirds of those perceiving that they had been personally discriminated against because of their weight were living with obesity at the time of responding to the survey (based on BMI calculation from self-reported height and weight). There was no significant effect of gender on experiencing weight-based discrimination in this study sample. Of those that had experienced weight-based discrimination ( $n = 109$ ), the majority had been discriminated against in public settings (for example public transport) “Very often” or “Fairly often” or “Sometimes”. A quarter felt that they had been discriminated against by healthcare workers because of their weight, shape or size. Almost half (49.3 per cent) of those that had experienced some form of weight-based discrimination considered themselves to have been deprived of opportunities due to their weight, shape or size.

**Table 8b: Perceived experiences of weight-based discrimination and weight stigma in a quantitative survey to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland ( $N = 1,049$ )**

Statement					
Have you ever felt personally discriminated against because of your weight?	Yes	10.4%	No	89.6%	-
Those who have experienced weight discrimination ( $N = 109$ )	Very often	Fairly often	Sometimes	Rarely	Never
You have had difficulty obtaining healthcare because of your weight, shape or size.	0.7%	1.0%	18.8%	26.5%	53.0%
You have been discriminated against by healthcare workers because of your weight, shape or size.	0.7%	1.7%	22.8%	27.2%	47.6%

You have been discriminated against in public settings or on public transport because of your weight, shape or size.	0.7%	14.6%	35.7%	29.4%	19.6%
You consider yourself a person who has been deprived of opportunities because of your weight, shape or size.	3.5%	2.7%	43.1%	26.2%	24.4%

Adapted from the *Perceived Weight Discrimination Scale* (Hatzenbuehler et al., 2009) and the *Experience of Weight-Based Discrimination Scale* (Farrow & Tarrant, 2009).

### Comparison with 2014 survey

Present findings from Ireland were compared with those of a previous **safefood** survey published in 2014 and examined public acceptability of a range of obesity-related interventions in Ireland. Levels of public support for 31 policies designed to address obesity, as examined by the 2 surveys, are displayed in Table 9. For consistency, the table provides the levels of support only among participants from Ireland only as Northern Ireland was not included in the 2014 data.

A number of significant changes in policy support were evident. In the most recent survey findings there were substantially higher levels of support for healthy meals provided in workplaces (26 per cent higher) and for insurance price reductions for healthy weight individuals (22 per cent higher) when compared with 2014. Additionally, there has been a rise in the proportion of people (11 per cent higher) who support an additional health charge for people presenting with obesity in Ireland.

In contrast, according to recent public views, there were lower levels of support for restricting the development of fast-food outlets near schools (17 per cent lower), industry-funded educational campaigns on healthy eating (14 per cent lower) and restricting development of fast-food outlets in towns and cities (14 per cent lower). Policies that fell in popularity also include restricting portion sizes in restaurants (12 per cent lower), banning promotional offers on unhealthy foods (11 per cent lower) and food labelling with calorie and nutritional information (11 per cent lower).

**Table 9: Comparisons of levels of agreement for policy interventions in Ireland between previous (2014) and current (2020) survey (organised from the greatest difference to the least), in a quantitative survey to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland**

<b>Statement</b>	<b>Previous (2014) survey Percentage in agreement <sup>1</sup></b>	<b>Current (2020) survey Percentage in agreement <sup>1</sup></b>	<b>Change in level of agreement since 2014</b>
The Government should make sure that meals sold or provided at workplaces meet a healthy standard of nutrition.	62%	87.6%	+25.6%
There should be health insurance price reductions for those of healthy weight.	38.6%	60.5%	+21.9%
There should be planning regulations to restrict the development of fast-food outlets in areas near to schools.	77.0%	60.1%	-16.9%
The food industry should help pay for governmental campaigns that promote healthy eating.	86.5%	72.7%	-13.8%
There should be planning regulations to restrict the development of certain food outlets (selling foods high in saturated fats) in towns and cities.	66.8%	53.1%	-13.7%
Portion sizes in restaurants and fast-food shops should be restricted.	53.4%	41.9%	-11.5%
There should be a ban on sales promotion and special offers on unhealthy foods.	68.1%	57.1%	-11.0%
All foods should be required to carry understandable labels with calorie and nutrient information.	92.0%	81.2%	-10.8%
There should be an additional health charge for those presenting with obesity.	29.1%	39.6%	+10.5%
All restaurants should be required to provide calorie and nutrient information on menus.	84.9%	75.3%	-9.6%

Statement	Previous (2014) survey Percentage in agreement <sup>1</sup>	Current (2020) survey Percentage in agreement <sup>1</sup>	Change in level of agreement since 2014
The Government should subsidise businesses that provide programmes to support their employees in healthy eating.	79.9%	70.6%	-9.3%
The Government should reward companies for healthy food innovations.	85.2%	76.1%	-9.1%
Television stations should give free air-time to governmental campaigns that promote healthier eating.	75.9%	69.1%	-6.8%
Children should have to participate in a minimum of 30 minutes exercise a day while at school.	90.1%	83.7%	-6.4%
Vending machines selling unhealthy food should be banned from our schools (including secondary schools).	82.1%	76.9%	-5.2%
The Government should ban advertising for unhealthy food that is aimed at children.	82.7%	78.4%	-4.3%
There should be public measures like free home delivery to support easier access to healthy foods for the elderly and those with lower incomes.	72.5%	76.6%	+4.1%
The Government should subsidise (make cheaper) fruit and vegetables to promote healthier eating.	86.2%	82.2%	-4.0%
The Government should impose limits on certain ingredients (for example salt or fats) on food companies to improve the nutritional content of processed foods.	81.4%	77.4%	-4.0%
The Government should make sure that primary school meals meet a healthy standard of nutrition. <sup>2</sup>	86.3%	90.0%	+3.7%

Statement	Previous (2014) survey Percentage in agreement <sup>1</sup>	Current (2020) survey Percentage in agreement <sup>1</sup>	Change in level of agreement since 2014
The Government should provide resources to improve exercise and playground facilities.	91.3%	88.1%	-3.2%
Education to promote healthy eating should be provided in all schools.	92.6%	90%	-2.6%
The Government should impose taxes on unhealthy foods using the proceeds to promote healthier eating.	69.2%	67.4%	-1.8%
The Government should provide resources to encourage women to breastfeed.	68.6%	67.0%	-1.6%
The Government should ban advertising for unhealthy food that is aimed at adults.	64.0%	65.3%	+1.3%
There should be a tax incentive to encourage sports participation with a tax break for the purchase of relevant sports equipment.	75.6%	74.7%	-0.9%
The Government should provide vouchers to low-income families to buy healthy foods at reduced prices.	76.3%	75.8%	-0.5%
The Government should spend money on campaigns informing people about the risks of unhealthy eating.	82.8%	83.1%	+0.3%
The Government should work with the food companies to improve the nutritional content of processed foods.	87.2%	87.7%	+0.5%
VAT (value added tax) rates should be lower for healthy foods and higher for unhealthy foods.	78.9%	79.5%	+0.6%

<sup>1</sup> Calculated by summing the proportion of respondents that answered “Agree” or “Strongly agree”.

## Qualitative focus groups

### Sample demographics

A final achieved sample of 64 adults took part in the focus group discussions. The final sample was larger than initially planned, as 8 participants were invited to every focus group (instead of 6) to allow for last-minute “drop-outs”. Slightly more participants lived in ROI than NI (56 per cent as against 44 per cent) and there were approximately the same numbers of men and women. Sample mean age was 43 years (SD=16). The majority of participants were 30 to 49 years old (45 per cent), were married or cohabiting (61 per cent), had a child under the age of 18 who lived with them (70 per cent) and had completed secondary education (48 per cent).

Overall, 51 participants of the 64 completed (or partially completed) the online questionnaire on background characteristics. Most of them perceived their health to be “Fair”, their diet “Quite healthy” and perceived themselves to be “Quite physically active”. Only 20 participants provided enough data to calculate a BMI value, the majority of whom lived with overweight ( $N=9$ ) or obesity ( $N=8$ ). A very small minority ( $N=5$ ; 10 per cent of 51 participants) reported receiving treatment for weight issues in the past. Two out of these participants reported having received tablets and one received counselling sessions. The breakdown of the demographic characteristics of the sample is provided in Table 10.

**Table 10: Final achieved sample focus group participants' demographic characteristics (n = 64) in a qualitative study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland**

Variable	Category	Number of participants	Percentage of sample (%)
Age	18 to 29 years	16	25.0
-	30 to 49 years	29	45.3
-	50 to 64 years	7	10.9
-	65 years and above	12	18.8
Gender	Male	29	45.3
-	Female	35	54.7

Variable	Category	Number of participants	Percentage of sample (%)
Location of residence	Northern Ireland	28	43.8
-	Ireland	36	56.3
Relationship status	Married or cohabiting	30	61.2
-	Not married or cohabiting	17	34.7
-	Prefer not to say	2	4.1
Children below 18 years old living at home	Yes	45	70.0
-	No	19	30.0
Education	Below second level	12	18.8
-	Secondary level	31	48.4
-	Certificate / Diploma / Vocational	6	9.4
-	Degree / Postgraduate	15	23.5
Socioeconomic status	Higher managerial, administrative, professional occupations	1	1.6
-	Intermediate managerial, administrative, professional occupations	6	9.4
-	Supervisory, junior managerial, administrative, professional occupations	22	34.4
-	Skilled manual occupations	12	18.8

Variable	Category	Number of participants	Percentage of sample (%)
Socio-economic status	Semi-skilled or unskilled manual occupations	17	26.6
-	State pensioner, unemployed on state benefits, lowest grade occupations	6	9.4
Medical conditions	Yes	15	29.4
-	No	31	60.8
-	Prefer not to say	4	7.8
-	Unknown	1	2.0
Self-reported Body Mass Index (BMI)	Healthy weight (BMI 18.5 to 24.9 kg/m <sup>2</sup> )	3	5.9
-	Living with overweight (BMI 25.0 to 29.9 kg/m <sup>2</sup> )	9	14.1
-	Living with obesity (BMI 30.0 kg/m <sup>2</sup> and above)	8	12.5
-	Unknown	44	68.7
Previous treatment for weight issues	Yes *	5	9.8
-	No	41	80.4
-	Prefer not to say	1	2.0
-	Unknown	4	7.8
Overall diet	Very healthy	3	5.9
-	Quite healthy	36	70.6



Variable	Category	Number of participants	Percentage of sample (%)
Overall diet	Not very healthy	10	19.6
-	Prefer not to say	1	2.0
-	Unknown	1	2.0
Physical activity	Very physically active	3	5.9
-	Quite physically active	25	49.0
-	Not very physically active	17	33.3
-	Not at all physically active	2	3.9
-	Unknown	4	7.8
Overall health	Bad	2	3.9
-	Fair	21	41.2
-	Good	17	33.3
-	Very good	10	19.6
-	Unknown	1	2.0

\* Two of these participants reported having received weight-loss tablets (one of whom described “Orlistat” tablets) and one of them received counselling sessions for weight loss.

### **Themes and subthemes identified in qualitative focus groups**

The findings from the qualitative focus groups were organised under 5 distinct themes, which are shown in Figure 1 along with their subthemes. The findings are relevant to participants from both Ireland and Northern Ireland but in cases where findings apply to participants from only 1 jurisdiction this is specified.

The qualitative findings are described in this section under each theme and subtheme; representative quotes are given to further highlight participants’ views and experiences. (It

should be noted that, whilst people-first language surrounding obesity was used throughout this study, quotes chosen for this report reflect the terms exactly as the participant expressed them, word for word, often *not* in people-first language).

**Figure 1. The themes and subthemes identified in qualitative focus groups in a study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland.**

Perceptions about living with obesity	Impact of Covid-19	Support for obesity related policies	Experiences of weight management services	Weight-based discrimination and stigma in society
Awareness of rising rates of obesity	Awareness of link between obesity and COVID-19	Suggested policies and the Government's role	Awareness and accessibility of weight management services available	Personal and second-hand experiences of weight-based discrimination
Health	Weight experiences during lockdown	Adults, Children, Healthcare Charges? Where support for obesity policies lies	Personal and second-hand experiences of weight management efforts or of using services	What constitutes weight-based discrimination and weight stigma?
Lifestyle	Obesity-related behaviours	Need for obesity prevention instead of management		Media, health and fashion industries' portrayal of those living with obesity
Right to receive equal treatment in the health system	Views on the Government's approach on obesity management during and after lockdown	Prioritising obesity-related policies		Ways to reduce weight-based discrimination and stigma
		Differences in levels of support for obesity strategies over time, comparing 2013 with 2020		

**Theme 1: Perceptions about living with obesity**

*Awareness of rising rates of obesity*

The majority of participants were aware of rising obesity rates and the impact upon health, through mass-media communications. Concerns over the obesity prevalence on the island of Ireland were expressed, both prompted and unprompted, throughout the focus group discussions:

*“... we all hear in advertisements about our health and obesity. And I've seen a lot of things, even on bus shelters ...” (NI3\_08)*

*“Well, in TV chat shows, and current affairs shows on the news, if there's medical reporting that, you know, every now and then it does rear its ugly head, to say, you*

*know, 'We have a problem with obesity in the country and we need to look at tackling it' ..."* (ROI5\_01)

As part of discussions around the leading causes of obesity, a range of factors were addressed. One participant highlighted the multifactorial nature of obesity and mentioned some of the factors involved in its development:

*"... and that [causes of obesity] includes your diet, your exercise, where you work at, who you live with, your social background ..."* (PROI\_02)

In addition to implicating the current food environment, a large number of focus group participants demonstrated a knowledge of the role of the genetic background in developing obesity:

*"... some kids maybe just have it in their genes, and that's just the way they are."* (NI2\_07)

*"... from both my mom and my dad's side, there's no obesity in my family. You know, that can be a genetic thing as well. And I've always been able to eat whatever I liked, and I just did not put on weight."* (ROI5\_01)

## Health

Focus group participants were presented with a number of survey findings in relation to people's attitudes on the scale of the challenge of obesity and its medicalisation. Specifically, some statements were read out to them along with the level of agreement with those statements found in the survey. Focus group participants were then asked to voice their views regarding what might have influenced survey respondents' answers.

In response to the finding that 80 per cent of survey respondents agreed with the statement that "Obesity represents a serious health condition for society", focus group participants reported that they were in agreement with the statement:

*"And I think, definitely, obesity represents a very serious health condition in our society ... you can hear it all over the news that it is a big issue."* (NI1\_01)

Similar to 87 per cent of the survey sample, focus group participants agreed that weight loss would improve the health of people with obesity. Additionally, when presented with the percentage of survey respondents who agreed with the statements, some focus group participants admitted that they expected higher levels of agreement:

*“Like, losing weight would greatly improve the health of people living with obesity; I mean, now, it's not really an opinion, as it's more of a fact. So, it is surprising to see that the percentages aren't actually higher across these statements.” (N13\_01)*

Many participants went further to expand on this topic by listing health issues that are associated with obesity, as drawn from personal experiences or from people in participants' immediate circle. Examples included metabolic disorders and cardiovascular disease, as well as orthopedic problems:

*“So, if you're obese for a long time, when you get older, you're going to start having problems your ankles, knees, and back and joints ...” (N11\_07)*

*“You're at risk. You just increase your risk of everything, every health condition under the sun. If you're obese, you're right there.” (PROI\_04)*

## Lifestyle

### Activity

Participants were invited to share their thoughts in response to the finding that 85 per cent of survey respondents agreed that “A person with a healthy body can lead a more active life”. The discussion showcased opposing views on the validity of the statement.

A few of the focus group attendees were in full agreement with the link between a healthy body weight and an active lifestyle. Even though some of them highlighted that there are numerous sports and activities suitable for people living with overweight they believed that, generally, people of lower weight were able to lead a more active lifestyle. Carrying additional weight, as experienced by some participants, was quoted as an important barrier to engaging in physical activity:

*“... people who have a lower weight will be the people who are more active and live a more active lifestyle, like I know everyone can, and it is a lot of people's choice, and active is down to the person individually, I suppose; but, generally, people who are in better shape and all are going to live a more active life.” (RO14\_01)*

*“... you wouldn't be able to be active if you'd carried weight, obviously, not as active as a healthy body weight person. So, for me, now, that to me, now, says – because I have been there, I have been, you know, an obese person.” (RO17\_05)*

Also popular was the opposite belief: that people living with overweight and obesity can achieve an active lifestyle similar to people with a healthy weight. Rugby players were used as an example in several focus groups to contradict a link between healthy body weight and active life. A number of participants made the case that, according to current measures of

weight status (that is, Body Mass Index), rugby players are classified as living with obesity, yet performing in a high-intensity sport:

*“Yes, and you can still live an active life, even if you’re – even if you’re overweight or obese, or whatever it is, you can still do it. It’s mentally, I think, that you can – you can think those things, though.”* (ROI4\_06)

*“I can run 6 kilometres, now, no problem whatsoever. I’m still obese.”* (ROI6\_06)

*“... rugby, as well, and especially at lower levels, you see a lot of people that are classed as basically obese. And there’s actually an under-18, he’s heavier than me and he runs about the pitch like nobody’s business.”* (PNI\_05)

One viewpoint that the majority of participants across a number of focus groups seemed united in was that people living with obesity can maintain a high physical activity level but there are limits to what activities they can be involved in compared with people with a healthy body weight. Also, the level of activity or sport intensity was often seen to be dependent on the level of obesity:

*“I kind of agreed with the statement; just that I know that, like, a lot of people who’d be obese who are quite active. But I think there is limits to what you can do when you’re obese in terms of what physical activities you can partake in and how active you can be, so maybe you’re limited to certain activities.”* (PNI\_02)

*“... I think it depends. You can be slightly obese but still quite an active person, or you could be morbidly, you know, extremely obese and, you know, find walking and everything quite difficult ...”* (NI1\_03)

### **Social life**

Focus group participants were asked to discuss the finding that 63 per cent of survey respondents agreed that people with obesity would have a better social life if they lost weight. A number of participants admitted that the link between weight status and socialising is more complex than a simple “agree or disagree” answer. The majority, however, reported that, based on their expectations, the numbers in agreement with the statement were high and that body weight does not play a role in one’s social life. Numerous personal experiences were voiced to support this belief:

*“No, I don’t agree with that, because you can have a good social life, like; you can go out, you can still go out, no matter what size you are, you’re obese, whatever. .... So, I had a great life, I went out socialising and went to work, looked after the kids ... So, I still, still didn’t need to lose weight to have a great social life.”* (ROI4\_06)

*“I think it really depends on your mindset and your emotional and mental health as much as it depends on your physical health. And I think, as well – I have bigger friends that have the best life and have their own insecurities, and slimmer friends that have their own insecurities as well ...”* (PNI\_03)

Contrary to this belief, there were a smaller number of focus group participants who stated that losing weight can encourage individuals to socialise more. Some of them further elaborated and explained that health issues resulting from increased body weight could be obstacles to going out:

*“A lot of years ago, I was lucky enough to lose a lot of weight. ... But I was able to go out more on a social basis.”* (NI3\_02)

*“If you're obese for a long time, when you get older, you're going to start having problems your ankles, knees, and back and joints and stuff. So that could affect your social life, if you're not able to get out and about that way.”* (NI1\_07)

When invited to provide comments on why the majority of the survey sample agreed with a better social life after weight loss, focus group participants spoke about self-confidence. Regardless of whether they agreed or disagreed with the statement they admitted that people living with overweight or obesity may feel less comfortable with their body size, which in turn can have a negative effect on their social life:

*“My mum was very overweight for a long time, and it really affected her self-esteem and her self-confidence, and she wouldn't have gone out very much, and she just didn't feel nice in herself. And so, I think that's probably where that comes from.”* (NI3\_08)

*“As much as I disagree with the statement, it all comes down to confidence as well. So, if you're a heavy person or you're carrying a little bit of weight, you can feel less confident in yourself looking in that mirror, and stuff like that ... I don't think it's about the weight or how skinny or how fat you are; that's just a matter of the confidence, and if you're happy in the body you're in ...”* (ROI7\_01)

Age was also seen to play a role in this, as 2 participants mentioned that younger people can be more likely to be self-conscious about their body and, therefore, not as keen to socialise as their healthy-weight peers, whereas older individuals would be more comfortable with their body image independent of their weight status:

*“Like, for younger people, I think that people think, you know, if I'm skinnier then I am going to look better, and I'm going to be more confident.”* (NI2\_05)

## Right to receive equal treatment in the health system

The vast majority of participants across all focus groups agreed that people living with obesity should have the same right as everyone else to receive treatment in the health system. When asked about this in relation to the survey findings (which indicated 82 per cent were in support of this statement), there was surprise expressed that any respondents disagreed with this. Many participants in the focus groups emphatically supported the right of people with obesity to receive equal care:

*“... so, if someone you know someone could be overweight because of depression, or some sort of trauma or past ... you don't know. So, it's not always just 'eat a lot, just love their food'. That's not always that reason. Most of the time, there's a reason behind it ... so I don't see any difference between obesity ... there's more always more to it. I think, in my opinion, anyway.” (NI1\_04)*

*“I don't feel anyone that is overweight shouldn't be entitled to anything the skinny person is getting, you know, like; they shouldn't care.” (ROI5\_07)*

*“People just get overweight, and I think that they need help and encouragement and everything else. There's no reason why they shouldn't have the same facilities as anybody else.” (NI2\_03)*

There was, however, a general acceptance that, for some treatments or surgeries, patients may be asked to lose weight, and this was viewed as something that was important for patient safety, for example, and not necessarily seen as discrimination. Participants were encouraged to consider a range of circumstances where this could apply. When prompted to discuss the issue of fertility treatment and weight, differences in opinion were evident, with several participants viewing weight loss positively for this purpose:

*“I know – I know a lady and she had needed a hip replacement but she was very obese ... the medics felt that it wouldn't be a good idea to do the surgery on her because she was so fat, so they ... gave her an opportunity to go and lose some weight before they would perform the surgery. So, maybe there's that risk, as well, even with getting anaesthetic ... if you're heavier ... They're not really discriminating against, but it's just that there's the more of a danger of actually performing surgery on you.” (NI1\_01)*

## Theme 2: Impact of COVID-19

### Awareness of link between obesity and COVID-19



Awareness around living with obesity and COVID-19 risk was explored in only a small number of focus groups. Most participants attending these focus groups reported that they were aware that people living with excess weight are more likely to contract COVID-19 and to develop more serious symptoms, compared with healthy-weight individuals. Among the reported sources raising awareness on this were family members and people in their immediate circle, as well as politicians and celebrities:

*“One of my siblings particularly has had a bit of a freak-out. He would be the demographic, like; he’s not – he is not massively obese, or anything like that, but he would be, you know, borderline. ... So, I’m conscious of it, and I think that’s probably spurred on a lot of my family to be self-conscious of their weight and to reduce their calorie intake ...”*(NI3\_06)

One participant with experience of living with excess weight explained that the fear of contracting the virus made her particularly alert during the pandemic and prompted her to try to lose weight:

*“... as soon as I heard about COVID, I actually started trying to lose weight, because I got frightened because I was overweight. I thought, ‘Oh, if I get COVID and I’m overweight I’ll be in trouble.’”*(PNI\_01)

#### Weight experiences during “lockdown”

When prompted to discuss the impact of COVID-19 on public perceptions of living with obesity, most participants shared their personal weight experiences. Weight-gain during the COVID-19 pandemic emerged numerous times during the conversations. The closure of gym facilities, increased snacking and making use of convenience food, the unique social and work circumstances due to the pandemic and the general lack of structure during the day were quoted as some of the main reasons that justified increase in weight:

*“... this is probably the heaviest that I’ve ever been but I’m not beating myself up over it ...”*(PNI\_03)

*“I think everybody will be a wee bit relaxed on it [weight gain] and think, ‘Aww, look, such and such has put weight on but, sure, we’ve been in lockdown for the past year.’”*(NI1\_04)

*“I know I used to go to the gym, and I have put on the ‘COVID stones’.”*(ROI5\_07)

However, it was also pointed out that, during the various periods of restricted movements and limited social contact – “lockdown” – people’s attitudes towards weight varied significantly and fluctuated over time. It became evident that people followed different

approaches in terms of eating and working out and there was even a smaller number of participants who described losing weight during lockdown. Those telling their personal stories of weight-loss success in lockdown were often commended for their efforts and discipline by other focus group attendees, for example:

*“Yeah, that’s amazing, because a lot of people would have gone the other way during lockdown, you know, they would have put on the weight, like. Fair play, fair play to you.”*(ROI4\_05)

### **Obesity-related behaviours**

As part of the discussion around weight experiences during the year 2020 to 2021, participants gave a brief overview of some key lifestyle changes that occurred in relation to nutrition and physical activity.

#### **Nutrition**

Many participants reported ordering and consuming take-away food more frequently now than before the start of the COVID-19 pandemic. Perceived benefits were the ease of getting a take-away and the enjoyment that it gave to them or their family. Additionally, “comfort eating” was a recurrent topic in conversations around nutrition during lockdown. For example, in the absence of a daily routine, opportunities to socialise or take part in sports activities, snacking was perceived to relieve the boredom resulting from being confined at home. Indulging in food was perceived as a widely accepted consequence of the lockdown and participants explained that many in their social circles would engage in similar eating behaviours:

*“Probably ‘comfort eating’ as well, you know, like. With the lockdown people were probably watching a lot more [named entertainment content provider] and stuff, you know, because there’s nothing to do. You know, you’re more inclined to go to the fridge and, or the cupboard and get, like, chocolate, you know what I mean?”*(NI2\_02)

*“I mean, there’s not much else they [people] can do now except just eat and drink.”*  
(PROI\_04)

One participant highlighted that media and advertising may have contributed to the adoption of unhealthy eating habits throughout the pandemic:

*“I’m just thinking about the kind of corporation type of fast food ... you know, [named food delivery service], everything that’s being pushed at us in the pandemic ... It’s not like, ‘Make a really healthy chicken tikka and, you know, treat yourself’. It’s*

*like, 'Get a takeout', 'Eat pizza', 'Eat loads of calories and you'll feel better' ... that's the message that I'm getting from, like, TV and my social media ..."* (PNI\_06)

### Physical activity

Many participants highlighted that the closure of exercise facilities and discontinuation of group sports marked a transition towards a more sedentary lifestyle and may negatively impact upon people's motivation to stay active, for example:

*"I think, like, the activity of actually working out – it's very difficult to do it on your own, and especially when all these services are closed and there's no sign of them opening again ... people's motivation will go down ..."* (PNI\_02)

Even though many participants seemed conscious of the health benefits of exercise, they explained that they found it difficult to maintain previous levels of physical activity. This was more evident for the participants from Ireland, who reported that the 5-kilometre travel restriction, which was put in place during the period that the focus groups took place, further limited the options for being active:

*"Obviously COVID, now, was holding us all back from doing everything that we took for granted. We can't do any more, except go for a walk. And then we're in a frame that there's only so far you can go and then you turn around."* (ROI7\_02)

Positive examples, from personal experience or from people's family members or circle of friends, were also heard, whereby participants described that engaging with exercise was a way to deal with the negative psychological impact of lockdown and even encourage some social support:

*"I think that [running] has helped me, particularly in lockdown, just to get away from the desk ..."* (NI3\_06)

*"... since lockdown started her [sister's] next-door neighbour, kind of, you know, 'C'mon out for a walk', and now ... she's never ever thought she would .... But she looks forward to them so much. So, if you had a friend who gave you a little nudge now and then and said, 'Come on, we will go even for a little walk?' Well, it can – it can kind of grow from there."* (ROI5\_01)

### Views on the Government's approach on obesity management during and after lockdown

A number of criticisms arose that targeted the Government's approach to helping people maintain a healthy weight during the COVID-19 pandemic, suggesting that more could be done to encourage physical activity and healthy eating:

*“It is hard; I mean, the way they have highlighted obesity or having more issues with COVID. You’d think there would have been more of a push to keep more open-air activities ongoing, like sports ...”* (PNI\_02)

In addition, 2 participants seemed mindful of future rates of obesity as a result of the current deterioration of eating and exercise habits and highlighted the importance of the Government’s role in addressing obesity after lockdown:

*“I definitely think that, you know, there should be more done for people with obesity, especially, you know, coming out of lockdown as well. It’s definitely gonna be a massive increase as well.”* (NI2\_04)

### **Theme 3: Support for obesity-related policies**

#### **Suggested policies and the Government’s role**

Throughout the focus group discussions, participants were prompted to provide comments on some of the most supported policies, as these were highlighted in the survey findings. In addition, focus group participants expressed their unprompted personal views on various strategies that could be effective in addressing obesity. The initiatives that received the highest level of support focussed on schools, the price of food, food environment and store architecture (lighting, layout, in-store promotion and so on), as well as education around obesity and nutrition.

#### **Schools**

Suggested initiatives voiced by the focus group attendees covered restructuring of the school curriculum to include more opportunities for physical activity and practical guidance with food preparation. In particular, the benefits of teaching home economics in school were highlighted by a few participants, both males and females, and included acquiring cooking skills and knowledge around foods’ nutritional value and how to budget when food shopping:

*“... even just practical, simple things and general awareness of – you know – maybe, even, it is budgeting around food or meal planning and planning in advance, so that it doesn’t get to the evening and it’s like, ‘Oh, wait, what will I cook for dinner?’”*  
(PROI\_01)

Most participants also placed a high level of importance on promoting a healthy food environment for children within the school. This could be achieved by ensuring school meals of high nutritional value and removing all unhealthy snacks from school premises, as this food environment was described as having a noticeable impact upon body weight:

*“... the difference between meals, like; it was just – when I started, it was sausage rolls for lunch or for breakfast, chips, gravy chips and then when ... actually, when I finished, my last few years they brought in healthy meals, and you could ... I mean, you could see the difference in people, like, people who were bigger, like.”(PNI\_02)*

*“I remember when I was in school, and they did bring in, like, a vending machine, and throughout the year there was a definite ... the teachers did definitely notice that all the kids throughout the 6 years did put on weight.”(PROI\_06)*

### **Food cost**

The price of food was repeatedly highlighted as a contributing factor to poor dietary habits and obesity rates in modern society. Participants in most focus groups observed that a healthy food basket costs considerably more than a food basket of unhealthy snacks and convenience foods. In this way, many families living on the island of Ireland did not have the money to maintain a healthy, balanced diet and, therefore, resorted to high-fat, high-sugar foods that were more affordable for them.

Numerous examples were brought up comparing the price of unhealthy snacks with healthier alternatives; for example, the price of take-aways was described as lower than home-made, balanced meals, similar to fruit being more expensive than buying a multipack of sweets. It was suggested that cost incentives should be put in place to encourage families to buy healthier foods:

*“You know, you can get 3 hamburgers in [named fast-food restaurant] for 1 pack of strawberries ... the foods, and the imbalance for the foods for eating healthy, needs to change.”(ROI6\_01)*

*“It's easier to cook processed foods, more fatty foods. Whereas eating healthy, cooking stuff from scratch, I find my food costs twice the money. I think it's a financial thing. If there was some sort of help that way?”(NI1\_04)*

*“I'm very aware of what they [children] eat, and about, everything is fresh, that they eat a lot of fish, and it's expensive to do that. And, so, I think, you know, it's cheap and it's easy to – to eat rubbish, to eat processed food, it's far, far cheaper. I think there needs to be attention to that.”(NI3\_08)*

### **Current food environment and store architecture**

The current food environment was also addressed, and the great number and variety of fast-food outlets and relevant advertisements, as well as cheap confectionery in prominent places in the supermarkets, were seen as contributors to unhealthy eating behaviours, especially among children. In addition, it was mentioned that fast-food outlets are more frequent in

low-income areas, making economically disadvantaged households more susceptible to unhealthy eating behaviours:

*“Supermarkets are just, like, unbelievable, you know, with sweet things that’s in them. ... And kids are going in and they’re coming out with big handfuls of sweets. It’s totally wrong ...”* (NI2\_01)

*“You’ll see, obviously, [named fast-food restaurant] ads all the time, you’ll see [named filled sandwich provider] ads all the time, you’ll see stuff like that. All fast food, tempting you to take these fast foods ...”* (ROI7\_01)

A male participant, originally not from the island of Ireland, observed that fast food was widely consumed within families in the UK and Ireland, more so than other places of the world, and the rest of the focus group attendees agreed with him:

*“I think the problem in here, and what I see – I’ve been here 25 years – in this country, in UK and Ireland, there is like a kind of fast-food culture, instead of making healthy food at home, you know, for your kids and for yourself ...”* (ROI6\_03)

Reducing the exposure to unhealthy food, such as sweets, fast food and convenience meals, was seen as a promising strategy to improve people’s dietary habits and help reduce the rates of obesity:

*“... don’t forget Easter’s coming up. ‘And I got 12 Easter eggs’ and ‘I got 40 Easter eggs’, ‘I got 10 Easter eggs’. Let’s reduce the shops that have the sweets ....”* (ROI7\_03)

### **Raising awareness around obesity and nutrition**

Focus group participants shared that education on obesity and its health complications is lacking across all age groups. A few focus group participants described that media could be utilised to raise awareness around obesity and educate people on the health risks associated with overweight. Instead of a means of promoting fast food, today’s media and information sources could educate on healthy eating and the benefits of maintaining a healthy weight:

*“I think if people knew how it’s [obesity] affecting your heart, your lungs, stuff like that, you know, obesity, it’s going to affect their organs more. ... that could be kind of a good health message for children, in particular, growing up, or teenagers, or whatever.”* (ROI7\_07)

In addition, it was perceived that there are a lot of parents that do not hold sufficient knowledge on balanced nutrition and, therefore, they are unable to provide their children with a suitable healthy diet. Educational sessions for parents covering areas of children’s nutrition were suggested:

*“You know, I think, to bring parents in for an evening, just to go through a few bits like that, just to say, ‘Look, you know, they need to get their quota of A, B and C’ ... And I think parents will buy into it, because I honestly think it’s a major lack of education among parents.” (ROI4\_05)*

### **The Government’s role**

The Government was seen as playing a significant role in obesity management. When discussing possible ways to tackle the issue, people underlined the Government’s responsibility to introduce all strategies discussed in the focus groups and to enforce these effectively. Approaches that fell under the Government’s responsibility included offering financial incentives for consuming a healthy diet (through vouchers for fruit and vegetables or by lowering their price), promoting educational campaigns on healthy eating and controlling the development of fast-food outlets, highlighting an awareness of the wider food systems in terms of contributing to obesity:

*“Reduce the tax on healthy eating and higher the tax on non-healthy, like fatty foods or wherever.” (ROI7\_08)*

*“Local government’s council – they decide, they know how many takeaways are trying to apply to be on a certain town and how many they can actually permit to being in a certain town. There’s a big responsibility, here, falls on the Government in terms of having regulation and the control of what’s happening.” (NI2\_07)*

### **Where support for obesity policies lies**

One aspect of the quantitative survey involved asking respondents about their views on interventions that had a focus on a particular age group, some with a focus on children and others with an exclusive focus on adults. Mixed thoughts were voiced when focus group participants were prompted to give their views on which age-group they thought that obesity-related policies should focus on:

*“It shouldn’t really be that hard to do a general kind of push for both adults and children. I think it’s important for both.” (PNI\_02)*

*“I definitely agree a lot with starting with children. Because it’s a generational thing. It’s not a quick fix, but it filters out, and it goes on and on.” (ROI4\_01)*

*“I would’ve thought adults would be a bit more important ...” (NI3\_02)*

During the focus groups the participants were also presented with some of the least-supported strategies (from the qualitative survey results) to tackle obesity. One of the policies was to apply additional health charges to people with overweight, for which general

disagreement was expressed across focus groups. A policy forcing people with obesity in Northern Ireland to pay for medical services that are usually free of charge, and in Ireland to pay more than people with healthy weight, was characterised as “*mean*”, “*harsh*” and “*discriminating*”:

*“It is horrendous, because it wouldn’t matter what you and who you are, you can always get an illness, you know? ... I think that would be outrageous.”* (ROI4\_07)

#### Need for obesity prevention instead of management

During the conversation regarding support for additional medical fees for people living with overweight, a male participant pointed out that priority should be given by the Government to policies that aim to target the *prevention* of overweight or obesity over those that aim to *manage* it. A similar view of prevention over management was expressed in another focus group, whereby a female participant highlighted the need to support individuals *before* they develop health issues as a result of overweight:

*“... the money should be put into preventing it [obesity]. And, you know, take steps to reduce obesity, through prevention, rather than, you know, charging people some of their medical costs because they needed treatment.”* (ROI4\_05)

#### Prioritising obesity-related policies

As the final focus group task, participants were presented with 4 policies:

- The Government should provide resources to encourage women to breastfeed.
- The Government should ban advertising for unhealthy food aimed at children.
- The Government should reward companies for healthy food innovations.
- The Government should provide vouchers to low-income families to buy healthy foods at reduced prices.

Participants were then invited to choose the policy that they perceived as most important and provide the rationale, or reasoning, for their choice.

A significant majority selected the ban of unhealthy food advertising targeting children. Participants spoke about personal experiences, whereby their own children were heavily influenced by advertising campaigns of food companies and expressed desire for the advertised foods:

*“... it’s not fair doing it on kids of that age that are easy, where their minds are easily manipulated.”* (NI2\_08)



*“Like my little daughter wants me to get these [names brand] ice creams because they’re a [names social networking service] craze, like; they’re like ice cream, full of sugar. ... But they’re a big thing, now; she won’t stop asking for them until she does get them ...”* (ROI5\_03)

Providing vouchers to low-income families for healthy foods was slightly less popular but still received a high level of support by the focus group attendees. It was generally agreed that lower-income families were more likely to make less-than-ideal food choices, as healthier foods, such as fruits, vegetables and fresh meat, were more expensive and, hence, unaffordable. Financial help towards their food bill was seen as an opportunity for them and their children to eat better:

*“I believe the Government should give vouchers to the low-income families, because they’re no different to everybody else and they just can’t afford to. So, I think, if the Government brought something in that they could buy the healthy foods at reduced price, well, then everyone would be eating healthy.”* (ROI7\_05)

Only a limited number of participants voted for company rewards for healthy innovations, similar to the provision of resources to encourage breastfeeding:

*“The Government rewarding companies for healthy food. If there was more healthy food in the market, you wouldn’t be eating as much rubbish.”* (NI1\_08)

*“So, breastfeeding, there, for me, is the start of it all. If the kid got the proper stuff from the start, from the get-go, it might make the difference definitely in that child going, getting older, you know?”* (ROI6\_05)

Differences in levels of support for obesity strategies over time, comparing 2013 with 2020

### **Nutritional labelling**

The focus group discussions also addressed some of the main differences in levels of support for obesity policies in 2020 and 2013, as highlighted in the previous (2014) **safe food** survey. One of the differences was the decrease in support for nutrient and calorie information in food labels and restaurant menus (down from 92 per cent to 84 per cent and from 85 per cent to 79 per cent, respectively).

Participants explained that as people tend to become more health-conscious over time they generally expected that the public’s desire to be aware of what they eat would increase and, therefore, there would be more support for nutritional and calorie labelling since 2013:

*“Because I think most people actually do look at these colours, you know, the ‘traffic light’, and little squares on all the food that you buy now. You see everyone looking at*

*it. I'm really surprised that the percentage has gone down. I would have thought it would be much higher.”(NI3\_05)*

When encouraged to think of possible reasons for the decline in the levels of support, most participants replied that the influence of the COVID-19 lockdown might have played a role. The year of 2020 was described as being “*tough*”, and people were not particularly concerned about the nutritional and caloric value of their meals, hence they did not seek out this information. They explained that it was a period during which people prioritised enjoyment of food over following the dietary guidelines:

*“... one maybe factor that could have influenced that [decline in support] was COVID, because people ... I guess, like, the psychology of it might be like, ‘Oh, I’ve had a tough year, I don’t really care what I’m eating’.”(PROI\_03)*

*“I think in 2013 we were maybe more in a kind of a health-conscious state, where there were other things that we could think about that were taking up our time and our focus. But I think 2020 was just ... it was just so rough, and I think people just wanted to eat what they wanted to eat. I think it maybe comes down to that, as well.”(PNI\_06)*

A minority of focus group participants pointed out that, since the policy has been in place for several years, it is possible that people are already aware of the nutritional content of foods in the market and, therefore, they no longer need to seek out this information on the labels of food products and menus.

In terms of their own attitudes towards nutritional labelling, focus group participants reported mixed views. A few reported that they personally found it helpful and that it encouraged them to make better choices when eating out. Similarly, people who try to manage their weight would find nutritional labelling a good tool to avoid high-calorie snacks or to become aware of foods with hidden sugars. On the other hand, focus group attendees admitted that eating out would be an occasion to “treat” themselves, so they would not have the desire to know the nutritional information of their meal:

*“... if you were having your Chinese [meal], you just went for the boiled rice instead of the fried rice; just, you know, little subtle changes can make the difference. So, if you’re aware of them, or even by reading the labels and that, and having the calories shown in the restaurant, that all would be beneficial.”(NI1\_01)*

*“I think, as well, if you’re going to have, like, a takeaway, say, for example, you kinda know that it’s bad – you probably don’t want to know ... like, I know I went to a Chinese [restaurant] across the road and it actually had the amount of calories that*

*was in one of the portions and it was, like, like, half your daily intake of calories!”*  
(PNI\_02)

### Health insurance charges

Specifically for the focus groups conducted with participants from Ireland, the findings on the level of support for reduced health insurance prices for those of healthy weight were presented alongside the previous findings. An increase in support (from 38 per cent to 61 per cent) was observed between 2013 and 2020.

The majority of focus group attendees expressed very strong criticism towards a policy that would charge people with obesity more for health insurance compared with healthy-weight individuals. Participants argued that people with excess weight may be in good health, even better than some of their healthy-weight peers, and body weight should not be considered as an index of general health. Additionally, it was repeatedly voiced that health insurance charges should be determined based on a thorough medical assessment as opposed to just a weight measurement:

*“I wouldn’t agree with charging people more or giving people a discount if their weight is lower than somebody else’s of the same height.”* (ROI4\_05)

*“Like, you could be much healthier than me and heavier than me, but your insurance is going to be dearer, because you’re heavier than me. That doesn’t add up, like.”*  
(ROI7\_08)

One participant pointed out that there would be practical issues in enforcing such policy, specifically the difficulty in establishing a price quota based on the amount of individuals’ excess weight.

A very small minority voiced agreement with future health insurance price reductions for people living with a healthy weight, the main justification being that people living with obesity have a higher likelihood of developing comorbidities that require medical treatment. One participant compared overweight with smoking, implying carrying excess weight is a personal choice that stems from eating unhealthily:

*“I actually kind of agree with it. Just in the sense of, if you compare the 2: if you’re taking out life insurance, and you’re a smoker, they’re not going to give you as much on your policy, because you’re smoking, ’cause you’re damaging yourself. And, like, we did say before, what you put into your body does affect your health. I mean, it’s not like everyone who’s obese is unhealthy, no; but it can cause health problems what you’re putting into your body. I mean, if you eat greasy food every day, I mean, you’re going to clog your arteries, you’re going to probably need, like, a stent in your heart.”*

*Like, all that stent can be claimed on your health insurance and then that's costing insurance companies money.”(ROI7\_06)*

When prompted to provide a possible explanation for the increase in the levels of support for this policy, focus group participants formulated an array of ideas and suggestions. A popular argument voiced in 3 different focus groups with participants from Ireland was that reductions of health insurance prices for people of healthy weight could work as an incentive for people with obesity to lose weight and as a deterrent to putting on weight:

*“I think, if they had higher health insurance for obese people, I think it would encourage obese people to actually lose weight, to actually get a better – cheaper, obviously – health insurance. I think that's what people are going for. But I disagree with that. But I think that's what people are, kind of, planning and aiming for. So, to encourage obese people to kind of slim down and try ... then they'll have a cheaper health insurance.”(ROI7\_04)*

Participants speculated that the survey sample consisted mainly of lower-weight individuals who believe they are entitled to reduced health insurance charges and were not concerned about the charges people with obesity would have to pay:

*“That was all the skinny people that answered that they agree that they should get a reduced rate than overweight people. [laughs]”(ROI5\_07)*

#### **Theme 4: Experiences of weight management services**

##### **Awareness and accessibility of weight management services available**

When asked about awareness of any services for weight management available, most participants that could identify any examples referred to well-known commercial weight management programmes available to join in their local area:

*“Yeah, our local GP service actually provides [named weight management programme], like, vouchers: you can go for, like, the first – I think it's maybe, like, 3 weeks or 5 weeks or something – for free.” (NI1\_05)*

*“I've only seen the likes of, like, [named 2 weight management programmes] and things like that. I have lots of friends to join them. I've done them before, myself.” (NI3\_08)*

In addition, there was a perception amongst some participants that these weight management services were generally very accessible or it was easy to join; however, on a small number of occasions the financial cost of the limited weight management options available was highlighted:

*“Personal trainers, pay the gym memberships, pay extra classes; then, if you are going to [named 2 weight management programmes], any of those, you have to pay for those every week. And there’s nothing else ... there’s – what else is there? I don’t know.” (ROI4\_06)*

The GP’s role in referring patients for weight management was mentioned by a small number of participants when discussing access to weight management services and it was generally felt that GPs often were not the most helpful when it came to weight management support, sometimes only highlighting if there was a weight issue, with no follow-up support or direction to relevant services. One female participant shared her own experience:

*“So, ... she [GP] didn’t even try to help, like. There was not support even from the doctor to say, to help, to get .... I lost that weight by myself by killing myself in the gym. She didn’t help me and nobody else did.” (ROI4\_06)*

Availability of bariatric (obesity-reduction) surgery on the island of Ireland was also discussed by a small number of participants, an area of weight management that came up unprompted in a couple of different conversations when discussing accessibility of weight management services:

*“Well, I think weight-loss surgery should be available in Northern Ireland and it’s not. It’s available in England, Scotland and Wales, under the NHS [UK National Health Service], but it’s not available here. If your BMI is over a certain amount in England, Scotland, Wales, you will get it free. So, I think that’s wrong, that we don’t have it.” (NI2\_01).*

#### Personal and second-hand experiences of weight management efforts or of using services

Personal experiences of weight-loss attempts and of accessing weight management support in various forms featured prominently in several of the focus group discussions. Second-hand accounts of friends or family members struggling with weight issues were also frequent. Personal accounts described varying levels of success with different weight-loss attempts; however, weight “cycling” (repeatedly losing and regaining weight) was evident and the difficulty of maintaining weight loss was highlighted:

*“... I lost the five-and-a-half stone. And then, so, 2017 was great. I looked great. And it was amazing. And then 2018, 2019, 2020, I put back on 6 [stone]. So, I worked so hard to get it off. But it was too hard to maintain. I couldn’t continue my life like that ... I had no life, I was just focussed on getting the weight off ... losing weight ... it was just crazy ... I was bonkers. ... I lost all the weight. ... but I lashed back on the 5 stone and*

*an extra stone back on top. ... this time, it'll probably all go back on again ..."*  
(ROI4\_06)

From personal and second-hand experiences of commercial weight management programmes it was clear that some participants disagreed with or questioned the approaches taken by commercial weight management providers:

*"I put on weight [at named commercial weight management service; Laughs]! I tried it [named commercial weight management service] years ago, and they said eat a bucket of potatoes for your dinner, eat 6 bowls of pasta. It's all free! I put on 2 pounds in 1 week!"* (NI3\_08)

*"... in terms of, like, [named commercial weight management service] and things, it seems to be promoting, like, this sort of, like, 'free food' or 'sin food', and all that sort of stuff, which is – I don't particularly understand or agree with to be honest."*  
(NI3\_01)

There were, however, also those with positive views on such programmes, and a general feeling that different things work for different people, highlighting variation in outcomes with commercial weight management services:

*"... I mean, I don't really know. They work for some people perfectly, but not everybody, you know."* (PNI\_01)

One participant gave a positive account of their experience of the "Diabetes Prevention Programme" in Northern Ireland, stating that the programme was very helpful in terms of content and structure and easy to access once referred:

*"... they invite you to go on a on a pre-diabetic weight management programme, and it's very, very good. It lasts for almost a year, maybe 9 months, and you go sort of once a month, and then once every 2 months, and it's all geared about, you know, healthy eating and healthy snacks and things that you can do to help you cut down and, you know, try and increase your steps. And there's a lot, there's lots of advice in it in relation to weight loss, healthy eating and exercise as well. So, I went on that just as the lockdown started and then we couldn't go anymore. So, I'm waiting to continue it on [named online conferencing software], but it was very good, what I done of it." (NI1\_01)*

Attempting to lose weight "*yourself*" or by using diet or activity tracking apps was also discussed by the participants. Some individuals expressed a preference for this type of

weight-loss effort and others emphasised the need for taking personal responsibility for one's weight, a recurring sentiment across the majority of the focus group discussions:

*"I use apps for just tracking, you know, like, steps and stuff. But also, there's ones that track your – what you're eating, and things like that. So, I find that really useful, because you can just do it yourself. And it's free." (N12\_05)*

*"If you take it back to where the result is, the result is with that individual. ... The only person that can fix that is the individual. You can bring all these things, you can give them everything. But it's the individual that's actually consuming the food or is whatever the behaviour ..." (PROI\_04)*

The issue of willpower in connection to weight loss arose in the conversation. The majority of the group offered examples of other barriers to weight loss beyond a lack of willpower, with an individual with experience both of living with obesity and of previous weight-loss attempts describing controlling weight as "*completely beyond willpower*", in his opinion. However, there were a few differences of opinion, with another male in the group stating

*"I disagree strongly with people saying that it's not a willpower thing; that's been demonstrated time and time again by people who have really turned their life around in terms of weight loss" (PNI\_04)*

### **Theme 5: Weight-based discrimination and weight stigma in society**

Personal and second-hand experiences of weight-based discrimination and weight stigma

Participants across all focus groups were asked about weight-based discrimination and stigma in society. Most participants felt that they had not personally experienced weight-based discrimination; however, several individuals recalled witnessing such discrimination and showed a general awareness of its existence. Although views were mixed, and many participants did not offer examples of weight-based discrimination, the predominant view was that weight stigma or discrimination in society was common.

The instances of weight-based discrimination (or perceived weight-based discrimination) described were mainly in fashion or in buying clothes, on public transport or aeroplanes or in job applications or interviews and can be outspoken or unspoken.

#### **Fashion**

*"I went into [named high-street fashion retailer] to buy a suit and they just looked at me and said, 'No chance'... I need[ed] a suit and they were like, 'You're joking. [Named larger-size clothing retailer] for you'. I was like, 'Right!' Being serious, I was raging ... and they were like, 'No you'll not get a suit in here ...'" (N11\_04)*

## Aeroplanes

*“You know, you only have to look at the way airplanes ... airlines treat people who are overweight, you know ... oh, you don't fit in that seat, so they need to charge you twice ... 'cause you're taking up 2 seats ... but who's measuring the seat? Do you know what I mean? Who is setting the standard for the seating sizes ...?”(PNI\_05)*

One participant offered an example of a woman with obesity having to buy 2 seats on an aeroplane and in this example she also highlighted the experience of other passengers as well as the person with obesity who viewed the experience as weight-based discrimination:

*“Well, I suppose, probably a lot of people getting on [an aeroplane] ... People would be huffing and puffing and kind of, like – because in fairness, this woman was big ... so it wasn't, it wasn't pleasant for her, of course; but then, I suppose, it's not pleasant for you, either, if your seat space is taken up? But after that, then she used to always have to book 2 seats to fly.”(ROI5\_02)*

## Non-verbal weight-based discrimination and weight stigma

The idea that weight stigma or weight-based discrimination can be subtle and non-verbal (that is, unspoken) was also described by a small number of participants:

*“Yeah, it's [weight stigma] something that's quite subtle, as well, you know. It's not really – people mightn't verbalise it. You know, people go along to a job interview, and, and they're quite obese, or something; they might sort of have that bias, hidden bias, but they're not gonna say it to you” (NI1\_01)*

## What constitutes weight-based discrimination and weight stigma?

There was also discussion and opposing views around what constitutes (that is, what defines) discrimination and stigma based on weight, using examples. Specifically, there was confusion and mixed opinions around whether issues viewed as “practical” issues in relation to weight should be counted as “weight-based discrimination” in the same way that people displaying negative attitudes towards those with obesity would be:

*“How much of that was people's attitudes and how much of it was because of practicality ...? ...to say, 'Look, I was denied healthcare because I was obese' ... but if it was for practical reasons ... then, is that discrimination in what we're talking about, in the sense of people's attitude? ... again, there's fairly obvious practical reasons why someone might feel discriminated against, say, on public transport.”(PNI\_04)*

*“But if it [weight loss] in some way could be used as an incentive for a person to, you know, drop weight ... if it's within their interest to, you know, to get them a lot*



*healthier, to make them more fertile. Definitely, I wouldn't disagree with that."*

(ROI4\_05)

One participant (NI1\_05) offered the example that if she were to apply for a job as a personal trainer when she is "*not fit*" then she would not expect to get the job over someone who "*is fit*", and that she felt this would not necessarily be "*discrimination*". This same participant qualified this idea by saying that "*It depends which way they'll be discriminating*" in terms of what constitutes true instances of discrimination, citing the ability of a person to do a job or not as a potential concern.

### Media and fashion industry portrayal of people living with obesity

There was considerable discussion around the fashion industry's portrayal of body image, larger or so-called "plus-size" models and pressure from social media in relation to body "ideals". Social media's role in weight-based bullying and negative stereotypes around obesity were also discussed. There was condemnation of unachievable body "ideals" pushed by the media and some praise for the inclusion of more diverse body types in advertising campaigns for clothes, for example:

*"Body image' is massive and it very much favours, like, skinny or muscley, you know, 'gym people', as opposed to people overweight, and it promotes them that they live the best lifestyles [and that] you have to be in top shape."* (NI3\_03)

*"I think the media has a lot to answer for ... they will be the first to post a picture on, you know, the front of a newspaper or a magazine or whatever you call her, in her bikini and ... 'My God, can you believe that she went to the beach looking like this?' and, you know, 'fat shaming', and I think that's terrible."* (NI3\_08)

### Visibility of larger clothing models

*"Like, I think we have become more aware as, like, we have now, like, even the modelling industry and stuff, like, they have 'plus-size' models, now. So, I feel like they're kind of getting introduced where I feel like, maybe a few years ago, wasn't as normalised, like. It would have been more maybe looking down on someone, which isn't fair, because, like, we're all just, like, equal, really? It doesn't really make a difference."* (ROI5\_06)

Opinion was divided around so-called "plus-size" models, specifically on whether the inclusion of larger models is a completely positive change, whether they are accepted by society and whether the fashion industry's use of "plus-size" models furthers the cause of reducing the stigma around obesity:

*“There’s a lot of advertising now for, like, girls that are overweight or ‘plus-size’, and they’re beautiful. And, you know what I mean, they’re coming on with these beautiful clothes on. And I’m sure it’s not healthy being like that there, any doctor would tell you that. But it’s an image, they’re putting it out there and they’re letting girls that are, like, you know, have those issues and say, you know, ‘Look, it’s okay; look at me, I’m gorgeous’, you know? ‘Look at the clothes I can get.’ And there’s a lot of that on social media at the minute.” (NI2\_01)*

*“It’s an attempt almost to normalise obesity ... apart from all the aesthetics or whatever, you know, it’s not going to be in anyone’s interest to be overweight or to really be carrying any excess weight, even like half a stone, even a quarter of stone. It can put you at risk ...” (PROI\_04)*

### Ways to reduce weight-based discrimination and weight stigma

Participants were prompted to consider ways in which weight stigma could be reduced; however, the majority of participants were uncertain about effective ways to reduce weight stigma and weight-based discrimination in society. Suggestions that were offered included introducing laws to make weight-based discrimination illegal (as is the case with other forms of discrimination), raising awareness of weight discrimination and its effect on mental health through media advertisements and education around weight bias or discrimination in workplaces and schools and through parents educating children.

### Laws and regulation

*“I think you should make it law and charge them all, put them in jail. Well ... you can’t call somebody, because of their race or their culture. So, you shouldn’t be able to talk about somebody’s weight!” (NI1\_07)*

### Raising awareness

*“But really, at the end of the day, I think it’s down to, like, more advertising about people’s mental health ... You know, the way you see as for people’s mental health, depression and stuff. But maybe they should put it in there about people being overweight, too, and make people be more aware of, like, ‘Well, if you pass a comment on one person ...’” (ROI6\_04)*

### Education

*“I would agree with the education element. I mean, even if you were to take that into the workplace, because I do think there’s a bit of it [weight-based discrimination] in the workplace, and it is a bit joked off, even in a professional environment ... like fire safety training, and all that kind of thing that you have to do. So, I mean, it could be*

*something that there's an education piece around discrimination, but it's actually called out about ..."* (NI3\_06)

# 6 Discussion

## **Quantitative survey findings**

The present report draws on data from people living on the island of Ireland and presents findings on their views around obesity and weight-related discrimination and weight stigma, as well as support for policies aiming to reduce the prevalence of people with obesity. Obesity was perceived by the majority to be more serious than other health conditions and high levels of support for obesity-related policies were evident, except for 2 strategies: restriction of restaurant portion sizes and additional health charges for those presenting with obesity. Although positive attitudes towards people living with obesity were generally observed, approximately 1 in 10 respondents reported past experiences of weight-related discrimination, with people living with excess weight being more likely to report such experiences. This report also highlights demographic differences in attitudes towards obesity interventions based on gender, age, university education, residential location and weight status.

## **Support for obesity-related policies**

The majority of obesity-related interventions were supported by the public. Findings indicate that great importance is attributed to measures or policies that aim to prevent or manage obesity during childhood. This is in agreement with previous literature demonstrating endorsement of measures targetting children as a priority of obesity prevention (102-104). Settings-based approaches to improving food environments, such as hospitals and workplaces, were also popular among the survey population.

Two strategies were not widely accepted: restriction of portion sizes in restaurants and additional health charges for people presenting with obesity. In relation to portion sizes, larger portions lead to higher food intake levels, in particular for pleasant-tasting, energy-dense foods (105, 106) and, thus, reducing portion sizes in restaurants is a promising strategy to improve rates of obesity in the population. In Ireland, measures around reducing portion sizes have been considered under the remit of the “Obesity Policy Implementation Oversight Group” (107); and in NI a need for encouraging food manufacturers to provide smaller portion sizes of energy-dense foods has been highlighted (1). Despite current evidence and recommendations to reduce portion sizes, larger restaurant meals are perceived to offer more value for money and are seen as attractive (106), which can explain why currently there is a lack of support for a policy to restrict portion sizes in restaurants.

As far as health charges are concerned, even though the majority of people believe that people living with obesity should not be charged increased health fees, this proportion has significantly risen in the last years, as highlighted by the comparison with the 2014 *safefood* report (65). Higher levels of support for additional health charges for people with overweight or obesity may have been caused by the current environment, which has been framed by media stories on higher COVID-19 death rates among adults living with overweight and obesity(108).

Certain interventions seemed to be more popular among individuals who lived in Northern Ireland. During the COVID-19 pandemic, Northern Ireland has been more heavily impacted compared to Ireland by recording a greater proportion of infected cases and a higher death toll due to the pandemic(109, 110). It is, therefore, possible that the population in Northern Ireland has become more aware of the link between obesity and COVID-19 pathology and, hence, more encouraging of steps to reduce rates of obesity. Additionally, women and individuals who obtained a university education are more supportive of certain interventions, which is consistent with the previous (2014) *safefood* obesity survey (65). Current literature confirms that differences between the genders in views about obesity and attitudes towards obesity prevention exist and suggests that there are a number of sociocultural parameters that worsen these differences (111). Moreover, people living with obesity were generally less supportive of policy interventions as suggested in this study; however, current evidence on the effect of a person's weight status on the acceptability of an obesity policy is lacking.

### **Views about obesity**

Eight out of ten participants in this survey agreed that obesity poses a serious challenge for public health. This finding is not unexpected, as this survey was conducted in the midst of the COVID-19 pandemic, during which people became increasingly aware of the impact of obesity on health (112). Survey responders expressed high levels of agreement with a healthy body weight being associated with benefits in health and lifestyle (activity and social life). Interesting findings around the causes of obesity include high levels of agreement with both current food environments and individual lack of willpower as being contributors to obesity development. On the other hand, people did not agree that obesity is inherited from each generation to the next. The overestimation of the role of environmental influences or of individual responsibility at the expense of other underlying factors (for example, genetic predisposition) in obesity development is not a new finding (36, 66, 113). However, it is currently unknown how these beliefs can influence support for initiatives that aim to address obesity. Hence, there is scope for further research work to explore whether certain views

about causes of obesity can lead to more favourable or negative attitudes toward some obesity-related policies.

### **Weight-based discrimination and weight stigma**

Even though weight-based discrimination was experienced by a small proportion of people in the overall sample (1 in 10), this proportion was 3 times higher among people living with obesity. These findings are consistent with previous research (19) and suggest that weight discrimination is commonplace in society across the island of Ireland. They also suggest that more should be done to raise awareness of this phenomenon. Attempts to tackle this can be seen in other countries, such as Canada (114), and should be considered in future work to reduce weight stigma on the island of Ireland.

Additionally, according to present findings, there was no significant gender difference in experiences of weight discrimination. This is contrary to existing evidence that women are more likely to report feeling discriminated against due to their body weight and shape compared with men (115), although there are few studies examining the influence of gender or other demographic characteristics upon feelings of weight discrimination. Furthermore, current findings show that equal rights to healthcare, independent of body weight, were endorsed, and the idea that current media portray negative stereotypes for people with increased body weight was prevalent. A growing body of literature illustrates that media often depict overweight individuals in a negative light by presenting them as having non-desirable characteristics or engaging in unhealthy behaviours (such as an inactive lifestyle and frequent consumption of fast food) (19, 23, 116).

### **Qualitative focus group findings**

The aim of the focus groups was to discuss the main findings of a recently completed survey on public acceptability of obesity policies and to build on these findings to provide context into the factors that influenced respondents' views. Focus group discussions highlighted topics including views about obesity, views around people living with obesity and on weight-based discrimination, as well as support for obesity strategies, experiences in available weight management services and the impact of COVID-19. A more in-depth discussion of the main findings is presented in this section.

### **Perceptions about living with obesity**

There was good awareness of the increasing numbers of people living with obesity, which was recognised as a significant public health challenge in modern society. Additionally, good awareness was demonstrated of the role of genetics by a minority of participants, which,

although encouraging, highlights that there is yet more to be done regarding public understanding of the multifactorial nature of obesity.

It was generally agreed that people living with obesity can be active in their daily lives and engage in sports, in which they can be as good as people of healthy weight. It was, however, recognised that carrying excess weight can become a barrier to engaging in certain types of intense physical activities. A previous qualitative exploration on experiences of people living with obesity has highlighted similar issues, whereby people with obesity reported a limited ability to engage in certain strenuous sports and activities compared with their “slimmer” peers (117). Reasons people gave for this were physical difficulties due to their body weight and size, as well as feeling self-conscious about other people when they experience difficulties performing these activities.

Contrary to the level of activity, the general agreement among participants in this study was that people living with overweight or obesity can enjoy a social life just as people of healthy weight do. However, when delving into experiences of socialising, issues of self-body image emerged. Feeling “body confident”, which was seen as independent of a person’s body weight, was regarded to have an impact on the level or quality of social life of the individual. Similarly, social avoidance due to lacking self-confidence has been repeatedly reported in the qualitative literature that focusses on people with obesity (117-120). Indicatively, in an exploration with women who formerly lived with obesity, achieving weight loss was linked to higher social acceptance and interacting more in social groups (118). Additionally, findings from qualitative interviews with people living with obesity suggest that negative remarks targeting a person’s body size can impact on the person’s self-esteem and lead to limiting social contacts (120).

### **Impact of COVID-19**

This work was conducted during the COVID-19 pandemic and the impact of the various periods of restricted movements and limited social contact – “lockdown” – dominated some of the topics discussed in the focus groups. Awareness of the link between COVID-19 and living with obesity was voiced during the focus groups and in some cases was seen as an incentive to maintain or even lose body weight during the various lockdowns. Contrary to this, the adoption of obesity-promoting behaviours during lockdown was a recurrent topic. Consistent with previous research during the COVID-19 pandemic (121-123), “lockdown” was considered to be a unique set of circumstances that justified unhealthier eating habits and increased inactivity that comforted the uncertainty and boredom caused by the social restrictions. Concerns regarding the adoption of unhealthy habits and consequent increase in

people's body weight were matched by expectations that the Government should introduce initiatives to encourage people to return to a healthier lifestyle when restrictions are lifted.

### **Support for obesity-related policies**

There was good support for most policies to address obesity, with equal interest in those targetting adults and children. Exceptions were the policies basing medical and health insurance charges on individuals' weight status. Even though now more people in Ireland would like to see lower health charges for people with a healthy body weight than in the past, our qualitative findings indicate that charging people for health insurance based on their weight measurement is not a popular approach and is considered a source of weight-based discrimination.

Acquiring practical cooking skills at school, making healthy foods more affordable and limiting exposure to unhealthy foods were recurrent topics in this exploration and were regarded as promising policies that will enable people to make healthy eating choices. Current evidence exists in favour of all 3 policies and their potential to improve dietary intake, in a research setting.

The effect of unhealthy food marketing on children's food preferences and eating behaviours is well reported in the literature (124, 125). Interventions that limited exposure to advertising of these foods have led to reduced weight-gain during childhood (126) and, therefore, regulating children's exposure to such marketing can be an effective policy to tackle childhood obesity (3). In terms of acceptability, previous data from the UK and Europe agree with present findings showing widespread support for restrictions in children's exposure to unhealthy foods across all media (127, 128). In the UK the importance of restricting advertising of unhealthy foods has been recognised as compelling and, following a public consultation, new rules will apply from 2023 on advertising unhealthy foods before 9 p.m. on television across the country (129). Challenges in implementing such policies exist, particularly in relation to digital marketing as it is individualised and personal and, therefore, difficult to monitor (130). Efforts to overcome those challenges, however, such as the "CLICK monitoring framework", a tool to support [European] Member States in monitoring digital marketing of unhealthy products to children (131), can greatly contribute to informing policies to reduce childhood obesity.

The desire for changes in food prices and specifically for more affordable healthy foods, particularly for those who struggle financially, has been backed up by cost-analysis evidence and can hold benefits in improving eating behaviours at a population level. Smed et al (2007) compared the nutritional effects of various food taxation schemes for different



socioeconomic groups and conclude that making healthy foods cheaper, relative to unhealthier foods, can confer the greatest dietary improvements among the low-income households (132), which, on the island of Ireland have poorer diets (133, 134).

Limited ability in food preparation has long been recognised as a barrier to healthful eating (135, 136). Interventions looking at the effect of cooking classes within a school setting have been shown to be effective in developing culinary skills across all school ages and in improving food preferences and behaviours (137-141) with clear implications for policies that aim to encourage individuals to make healthy food choices.

### **Experiences of weight management services**

Qualitative exploration of public views on and experiences of accessing weight management services in both Northern Ireland and the Ireland is limited. In the current study it was apparent that there was a lack of awareness of what was in place in terms of weight management services for the public beyond the popular commercial weight management programmes (for example Slimming World®, Weight Watchers®). Weight “cycling” and the difficulties of maintaining weight loss once achieved was commonly highlighted in personal accounts of weight loss and when describing the experiences of friends or family members.

Commercial weight management services are heavily marketed and, as such, awareness of their existence was high. Alongside this, there is a lack of freely available health service-funded programmes to support those with obesity. This is thought to be the case in both the UK and Ireland, with mapping studies of weight management services in the UK demonstrating that coverage and availability of services were shown to vary considerably depending on location (142, 143). There was also scepticism shown towards commercial weight management services, specifically about whether plans were realistic or logical, with a number of participants describing weight-loss attempts made by themselves (by going to the gym and so on).

On access to weight management services, most participants felt that commercial weight management programmes were easily accessible. Only a small number suggested the price as a potential barrier, while price was referred to previously in the literature as a barrier for lower socioeconomic groups in particular (144). Bariatric surgery was also discussed, where a lack of access to such treatment was highlighted. Bariatric surgery is National Health Service (NHS)-funded in England, Scotland and Wales but in NI it is currently not available as part of NHS care. In the ROI, long waiting lists for surgery was presented as a problem leading to a culture of medical tourism, something that is seen in other countries where waiting lists far exceed demand or where costs are considerably higher than cheaper options for surgery abroad (145).

Interestingly, the role of the GP in providing support for weight loss was discussed unprompted by a small number of participants. The perceived lack of support from GPs or the tendency for support to differ among GPs is supported by research showing the stigmatising attitudes of some GPs towards those with obesity (146). However, this also could relate to the problem of a lack of services for GPs to refer patients to for weight management and the time pressures experienced by GPs in both NI and the ROI.

Personal experiences of weight-management attempts, along with experiences of friends or family members, were discussed at length. The extent of the discussion on this topic was in keeping with the fact that many people will attempt to lose weight or get healthier at some point in their lives (147). Of the participants that shared their own weight-loss experiences, losing large amounts of weight only to regain this weight and perhaps additional weight was not uncommon, indicative of the weight “cycling” known for many years, now, to occur in some individuals attempting to lose weight throughout their life (148, 149).

### **Weight-based discrimination and weight stigma**

Weight stigma, bias and weight-based discrimination have been shown to be pervasive in Western societies. It exists in many facets of society including in healthcare, workplaces, public transport, other public settings and even from family members or friends (19, 21) and this was reinforced in the present research. A small number of participants seemed to be unaware of this type of discrimination or could not think of any examples, perhaps because they have not witnessed it or perhaps this suggests the normalising of weight bias in society where it is still largely considered acceptable by many (150). The majority of participants were aware of this kind of bias or had experienced it either first- or second-hand. Settings in which these experiences were described were similar to settings described in the literature, for example on public transport and in healthcare, in fashion and in workplace settings. One notable account of an experience in a clothing store was a clear example of the everyday discrimination that some people with obesity may encounter. The importance of the “non-verbal” stigma that individuals can show towards those with obesity was highlighted, something which has been a feature of individual accounts of experiencing weight stigmatisation in the literature (151).

Confusion and debate around what defines a stigmatising weight-related experience was evident from the conversations, with various example scenarios offered up as explanations. The issue of being refused certain forms of healthcare unless you lose weight was a point of some debate, as was the practicalities of transport issues, for example, for those with obesity. It could be suggested from this confusion that a better understanding of such issues may be a good starting point from which to help address the common-place instances of this

type of discrimination. However, a recent review on addressing weight bias and discrimination emphasises the need to move beyond raising awareness alone. The authors suggest measures such as creating resources to support policymakers, using personal accounts from people living with obesity to engage audiences and communicate anti-discrimination messages more effectively and developing a better clinical definition for obesity (152).

Little was offered by the participants themselves regarding how best to reduce weight-based discrimination. Making instances of weight-related discrimination against the law was suggested by a participant who felt strongly about the matter, something which has been advocated for elsewhere (153). The limited suggestions otherwise centred around education and raising awareness of the mental health effects on those with obesity when they are discriminated against or stigmatised due to their weight.

Furthermore, discussion of media portrayal of those with overweight drew mixed views from participants, despite it being evidenced that media often depict those with overweight in stereotypical ways that could reinforce stigma (154). The idea of “plus-size” or larger models was supported by several participants; however, the subject of “health” and whether it was “healthy” to be “plus-size” was debated, with some participants showing confliction in their own views on this topic. This finding was in support of previous research, which has shown that consumer responses to “plus-size” models can be somewhat laden with contradictions (155).

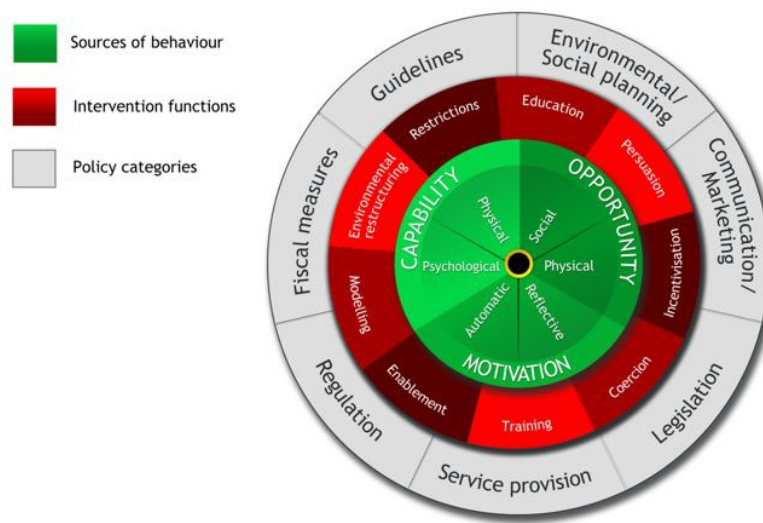
### **Using a behavioural science approach to facilitate meaningful change in public health policy: The Behaviour Change Wheel and the COM-B Model**

The incorporation of behaviour change theory is an important consideration for policymakers in health, amongst many other disciplines. The importance of behaviour change in obesity is well recognised; however, it has been shown that policies targetting obesity still have a sharp focus on information-giving, resulting in an over-reliance on individual agency to change behaviour (92). In addition, strategies to target specific behaviours related to obesity in the most appropriate or effective way according to relevant theory and evidence-base are lacking. According to the evidence from behavioural science, more emphasis should be placed on facilitating marginal shifts in behaviour (for example, through changes to the food environment to have more healthy options available) that benefit individuals in terms of weight management over time. Furthermore, these marginal changes in behaviour have knock-on effects in the food system to encourage reformulation and healthy food innovations (156).

The most appropriate or effective way to target certain behaviours can be defined by evidence-based behavioural models such as the “Behaviour Change Wheel” (BCW) framework and the Capability-Opportunity-Motivation-Behaviour (COM-B) Model (157), which policymakers are increasingly expected to utilise within the public health context. The COM-B Model identifies the components needed for targeted behaviour change to occur. The COM-B Model “hub” in the centre of the BCW (Figure 2) identifies the sources of the behaviour that could prove fruitful targets for intervention. The acronym “COM-B” stands for “Capability, “Opportunity” and “Motivation” – essential, interacting components that are suggested to lead to changes in “Behaviour”. An individual or a population embarking upon making a particular behavioural change must have the capability (physical and psychological capability), the opportunity (physical and social opportunity), and the motivation (“reflective”, or planned, motivation; and “automatic”, or habitual, motivation) in order to change the relevant behaviour.

The BCW provides a framework for choosing appropriate intervention functions (such as education, environmental restructuring and so on) and policy types (such as fiscal measures, regulation, communications, marketing and so on) based on what is known about the target behaviour. Interventions in the red section of the wheel need to change 1 or more of the COM-B components for behaviour change to occur. The outer layer of the wheel identifies 7 policy categories that can support the delivery of these intervention functions. The policy categories are similar to the common types of policies implemented in various sectors to effect change. Examples include fiscal measures (such as so-called “sin-taxes”), communication and marketing in the form of governmental mass-media campaigns to encourage healthy eating, and environmental and social planning (such as creating more “green spaces”) (Figure 2).

Figure 2. The Behaviour Change Wheel. (Source: (158))



### Existing research

A matrix has been developed linking intervention types of the BCW to particular COM-B constructs (158). The matrix in Figure 3 indicates the most appropriate intervention functions for bringing about change in each COM-B construct. Recently, this matrix of links between the COM-B Model and the BCW has been used to map national policy in England to address obesity in the early years of childhood (159). This approach highlighted gaps in policy provision from a behavioural science perspective, illustrating how both models can be applied in a policy context, and to aid a deeper understanding of behaviour change. Findings illustrated that despite substantial policy activity being identified for early-years obesity the intervention function of education was the main focus of these policies, followed by environmental restructuring. In terms of the COM-B Model, the findings also indicated that there was scope for increasing the number of policies targeting capability (such as skills acquisition) and to increase reflective and automatic motivation. A similar mapping study has been undertaken in NI, relating to adult obesity policies, to assist with highlighting gaps in service provision (manuscript in preparation), as applying a theory-based approach to policy-making prospectively (that is, looking to the future) should increase the likelihood that policies will successfully influence behaviours in the desired manner (157). Furthermore, it can also help us to understand why certain policies may not work in practice.

Figure 3. The matrix of links between COM-B Model constructs and intervention types of the Behaviour Change Wheel, indicating the most appropriate intervention functions for bringing about change in each COM-B construct. (Source: (158).)

Model of Behaviour: sources	Intervention Functions								
	Education	Persuasion	Incentivisation	Coercion	Training	Restriction	Environmental restructuring	Modelling	Enablement
Physical Capability									
Psychological capability									
Physical opportunity									
Social opportunity									
Automatic motivation									
Reflective motivation									

### Results from present research

Table 11 contains a selection of policies or initiatives discussed in the qualitative focus groups in the present research. Participants were asked to rank the 4 policies or initiatives in order of importance. Table 11 serves as an example illustrating the relevance of the COM-B Model and the BCW to varying policies, where all 4 policies or initiatives have been considered in terms of target behaviour, the relevant COM-B construct or constructs (that is, whether any elements of Capability, Opportunity or Motivation need to change), the most appropriate intervention type or types and the most appropriate policy category for the mode of action.

**Table 11: Links between COM-B Model constructs and most appropriate Behaviour Change Wheel intervention types and policy categories to enact target behaviour for 4 example obesity policies or initiatives ranked in terms of importance by participants in qualitative focus groups in a study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland**

<b>Policy or initiative</b>	<b>Relevant COM-B Model constructs to change target behaviour (Capability / Opportunity / Motivation)</b>	<b>Behaviour Change Wheel intervention type or function</b>	<b>Behaviour Change Wheel policy category</b>
Ranked first: The Government should ban advertising for unhealthy food aimed at children.	Physical opportunity Social opportunity Automatic motivation Reflective motivation	Restriction	Legislation Regulation
Ranked second: The Government should provide vouchers to low-income families to buy healthy foods at reduced prices.	Physical opportunity Social opportunity Reflective motivation	Incentivisation Enablement	Fiscal measures
Ranked joint third: The Government should provide resources to encourage women to breastfeed.	Physical capability Psychological capability Physical opportunity Social opportunity Reflective motivation Automatic motivation	Education Enablement Persuasion Training Incentivisation Environmental restructuring Modelling	Service provision Guidelines Communications and marketing
Ranked joint third: The Government should reward companies for healthy food innovations.	Physical opportunity Reflective motivation	Incentivisation Enablement	Fiscal measures

As a worked example: When prompted to rank the suggested obesity policies or initiatives, a ban on advertising of unhealthy food to children was the most popular choice across many of the focus groups. This type of policy would be considered “restriction” according to the intervention functions of the BCW. To enact this policy successfully the Government would need to legislate against advertising unhealthy foods to children, accordingly, and this action

would fall into the “Legislation” policy category of the BCW. In legislating so, children’s opportunity (both physical and social) to be exposed to unhealthy food advertising would be reduced considerably. The automatic and reflective motivation of children to ask their guardians for unhealthy food options would, in theory, also be reduced as a result of the new (proposed) legislation. This shows, in brief, how behaviour change theory can be embedded into policy. This approach can be used to facilitate many positive healthy choices in addition to restricting or nudging people away from poorer dietary or lifestyle choices.

The most supported policies in the present survey are shown in Table 12. They are categorised according to which constructs of COM-B they relate to, along with the most appropriate intervention types or functions to target them and the policy category or categories they would likely fall into. Mapping policies using this behavioural science approach allows a detailed exploration of exactly how policies are targetting behaviours, compared with how the relevant behaviours should be targetted according to behavioural theory.

The Government ensuring that school meals meet a healthy standard of nutrition (the first example given in Table 12) could potentially be enacted through influencing physical opportunity, social opportunity and both types of motivation, acting by restriction, environmental restructuring and enablement. Healthy meals being provided at school would ensure that children have the physical opportunity and social opportunity (by changing the cultural norm to healthy food being eaten at school) to eat healthily at lunchtime. Having only healthy food available would increase the likelihood that eating healthily is the automatic choice. Further to this, there could be the situation whereby children have the option of bringing in their own packed lunch to school, which might be an “unhealthy” option. This could involve reflective motivation, if children have the choice of the only option at school being a “healthy” choice or bringing in their own option, be it “healthy” or “unhealthy”.

One BCW intervention function well-suited to facilitating this type of obesity intervention would be restriction by reducing the opportunity to eat unhealthy lunches at school through rules (either enforced by the school or else brought in by governments and that schools must abide by). Environmental restructuring is also applicable as the physical context of school lunch provision would be altered to only provide healthy options, promoting healthy changes in the children through their environment. Enablement is also relevant here especially in the case of free school meals, which are offered in some schools to children whose families are on low incomes. Bringing in healthy standards would enable those receiving free school meals to access good quality, healthy food by increasing physical opportunity and automatic motivation. Enablement, in this example, is relevant through increasing means (which can



include financial means) or reducing barriers to access healthy food at lunch time. If healthy standards are not brought in, there is the possibility that this financial enablement of free school meals leads to unhealthy food being consumed.

Mapping findings from the current research using the BCW shows how potential policies to address obesity on the island of Ireland that are supported by the public could be implemented effectively, as evidenced by behaviour change theory.

**Table 12: Links between COM-B Model constructs and most appropriate Behaviour Change Wheel intervention types and policy categories to enact target behaviour for the most supported policy initiatives presented to participants in a quantitative survey and ranked in order of their preference, in a study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland**

<b>Policy or initiative</b>	<b>Relevant COM-B constructs to change target behaviour (Capability / Opportunity / Motivation)</b>	<b>Behaviour Change Wheel intervention type or function</b>	<b>Behaviour Change Wheel policy category</b>
The Government should make sure that school meals meet a healthy standard of nutrition.	Physical opportunity Social opportunity Automatic motivation Reflective motivation	Restriction Environmental restructuring Enablement	Legislation Regulation Guidelines Service provision
Practical education in food preparation should be taught in all schools.	Physical capability Psychological capability Physical opportunity Social opportunity Automatic motivation Reflective motivation	Education Training Persuasion Environmental restructuring Modelling	Legislation Regulation Guidelines Service provision Environmental or social planning
Education to promote healthy eating should be provided in all schools.	Psychological capability Reflective motivation	Education Persuasion	Guidelines Service provision Communications and marketing Regulation
The Government should make sure that meals	Physical opportunity Social opportunity	Restriction	Guidelines Regulation

Policy or initiative	Relevant COM-B constructs to change target behaviour (Capability / Opportunity / Motivation)	Behaviour Change Wheel intervention type or function	Behaviour Change Wheel policy category
available in hospitals meet a healthy standard of nutrition.	Automatic motivation	Environmental restructuring	Legislation Service provision
The Government should provide resources to improve exercise and playground facilities.	Physical opportunity Social opportunity Automatic motivation Reflective motivation	Environmental restructuring	Environmental or social planning

## Strengths

The present study employed a mixed-methods approach, which allowed a much richer exploration of obesity-related views and support for obesity policies than the quantitative survey data alone could provide. The sample was representative (quota sampled), geographically dispersed, from varied socioeconomic backgrounds and had an equal male–female split. It is the first survey presenting views in both jurisdictions on the island of Ireland. The diverse sample also can increase confidence that present findings are a true reflection of the public’s views and policy support on the island of Ireland. Further, present findings provided a novel insight into weight stigma and weight-based discrimination rates for the island of Ireland, a topic that has been underexplored so far.

## Limitations

It should be noted that the present study was conducted during the COVID-19 pandemic and, therefore, the public’s views about obesity and obesity-related measures may be influenced by popular attitudes and commonly held opinions at this time and in these historic circumstances. This may also explain the great increase in support for certain obesity-related policies (for example, health insurance price reductions for individuals with a healthy weight) observed between the *safe food* reports of 2014 and 2020. Additionally, the restrictions to control the spread of COVID-19 dictated the remote data collection methods employed in both the survey (conducted by telephone) and virtual focus groups (conducted online through Zoom™ web-conferencing software). Even though researchers collecting data were

trained in utilising remote technologies it is thought that face-to-face data collection would have facilitated even richer researcher–participant interaction.

A substantial proportion of the survey respondents (31 per cent of the overall sample) did not complete the anthropometric questions (asking for height and weight measurements) that would allow us to obtain a BMI value. According to the initial survey protocol the questionnaires would be self-administered and, therefore, participants would enter the values for height and weight themselves. However, due to the telephone methodology used, the questionnaire was administered by the interviewer, which may have increased non-response rates for height and weight measurements. It is also possible that, because of the COVID-19 lockdowns, people may not have visited a healthcare professional or setting where they could weigh themselves, or that people may not have wanted to report their weight, due to feeling that it had increased over the various lockdowns (as discussed in focus groups). Currently there are not many studies reporting non-response rates for self-measurements of height and weight. However, non-response rates in this study are high, compared with the results of the United States National Institute of Environmental Health Sciences’ “Sister Study”, in which 8 per cent of these values are missing (160) but lower than the non-response rates among women in a study in Guatemala, in which a BMI value could not be calculated for 47 per cent of participants (161). In the present analysis, men had better response rates than women in both height and weight, a trend also observed in data of the “National Health and Nutrition Examination Survey” (162). Additionally, among women, those without a university degree were more likely to choose not to report their weight or height. High non-response rates in height and weight pose a challenge in surveys that rely on self-reports. Furthermore, demographic differences may exist in self-reporting of anthropometric characteristics and warrant further investigation.

# 7 Conclusions

This research highlights that public support for many obesity policies is high across the island of Ireland; however, the multifactorial nature of obesity presents significant challenges for policymakers. Furthermore, the “socioeconomic gradient” associated with obesity is of note within this research, with at least 1 in 5 respondents reporting that they find it “Difficult” or “Very difficult” to cope financially. (The social or socioeconomic gradient is a term that describes the case that socially and economically disadvantaged people have worse health and shorter lives than those who are more advantaged.) Challenges relating to income are inextricably linked to health-promoting or health-impairing behaviours and this is borne out in key findings here, such as those with a higher level of education being more supportive of educational policies focussing on children and schools and on restricting fast food. Barriers such as income and food cost and availability need to be addressed as part of a wider response to tackling obesity.

Findings of this mixed-methods study indicate high levels of public awareness of the rising rates of obesity and its effect on health, including during the period of COVID-19 pandemic. The public are likely to endorse the introduction of most obesity-related policies, with a particular focus on those that target children. However, medical and health insurance charges based on individuals’ weight status are not well supported. Comparison with previous evidence shows that public acceptability of obesity interventions has generally remained consistent through the years (since 2014). Finally, even though there is awareness that weight stigma and weight-based discrimination are prevalent in society, there is confusion over what constitutes these.

This research work was conducted amidst the context of COVID-19 pandemic. This should be taken into consideration when interpreting some of the differences between 2014 and present findings, making it hard to use any small differences as a basis for theories about what may happen in the future as COVID-19 may have significantly altered public views surrounding eating and physical activity behaviours. Further research work is required over a number of years to assess trends in views about obesity and policy support and the impact of COVID-19 on these.

# 8 Recommendations

This work reveals broad public support for policies aimed at reducing the prevalence of people living with obesity. Promising policies highlighted in the present exploration are in line with the current initiative in Ireland – “A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025” – and with “A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012–2022” in NI, as well as obesity policies across Europe, such as the “EU Action Plan on Childhood Obesity” (1-3). Recommendations from this body of research include:

## Policy measures

1. Government departments should continue to implement nutrition standards for meals provided in education and healthcare settings; and to develop and implement nutrition standards for other settings.
2. All children and young people should have the opportunity to develop practical food skills and knowledge on healthy eating during their education. This should be supported by the provision of the necessary facilities to support education on eating healthily, learning essential cooking skills and staying physically active in all schools.
3. The marketing of unhealthy foods including digital marketing should be restricted, particularly marketing to children. The development and implementation of further mandatory codes of practice on marketing unhealthy foods for both adults and children should be considered.
4. Policymakers should consider extending fiscal and pricing policies such as the tax on sugar-sweetened drinks.
5. Policy options that were less supported such as reducing portion sizes offered in restaurants, should be coupled with approaches that are supported by consumers e.g. a price reductions to make smaller meal sizes more appealing.
6. The effects of measures implemented should be regularly monitored.
7. Obesity policies should be mapped (including prospectively) using a behavioural science approach to ensure they are feasible, acceptable and potentially effective.
8. Monitor support for current and future policies, as public focus for activities that promote healthy behaviours may change based on a particular social climate or time period (such as the COVID-19 pandemic).

### **Perceptions of obesity**

9. Raise public awareness that obesity is a disease that is multifactorial in nature. This should include specific focus on awareness of weight stigma and ways to overcome it.
10. Commit to the use of person first language in all communications related to obesity; ensure that all imagery used in communications is non-stigmatising and not discriminatory.
11. Ensure the experience of people living with obesity is considered and reflected in all aspects of public policy.

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# Appendix 1 Ireland and Northern Ireland policy mapping

## Purpose

To help inform the formulation of the questionnaire in the “Public Acceptability of Policies to Address Obesity” research project, a policy mapping exercise was undertaken to assess the factors that are internationally recognised as important in food policy, and to make a basic assessment of their application on the island of Ireland. We adapted the International Network for Food and Obesity / Non-communicable Diseases (NCDs) Research, Monitoring and Action Support’s Healthy Food Environment Policy Index (INFORMAS Food-EPI) framework to analyse obesity-related policies on the island of Ireland, with the addition of the domains of “Climate Change” and “Physical Activity”. (INFORMAS is an international collection of organisations concerned with food environments and non-communicable diseases, and the Food-EPI is a framework tool used to appraise food-related policy in a country.)

The policy “map” (Table 13) also encompasses domains that may have been excluded from more recent frameworks. The mapping exercise conducted was purely to inform the building of the questionnaire. This policy mapping exercise predominantly informed the content of the questionnaire (i.e. to ensure adequate coverage of obesity-related policies to gauge public opinion). The mapping exercise was performed by searching for policies in each INFORMAS policy area and for related activities. The information in Table 13 does not represent all of the related policies and only concerns policies that relate to public management of obesity. It is adapted from the Food-EPI framework but is not a replication of it. It should not be used in place of any official Food-EPI publication. All policies are current, or very recent, and are government policies.

## Policy map structure

[INFORMAS](#) uses a framework of policy interventions (the Food-EPI) to assess different countries’ approaches to food policy. It lists interventions that concern the food environment within 2 main components, “Policy” and “Infrastructure Support”. Each component contains several domains and these domains include a set of good practice indicators and benchmark statements that cover the breadth of international best practice for healthy food environments. The Policy domains used for the purpose of this map are Food Composition, Labelling, Promotion, Prices, Provision, Retail and Trade. The Infrastructure Support domains are Leadership, Governance, Monitoring and Intelligence, Funding and Resources, Platforms for

Interaction and Support for Communities (163). (We added “Policy” domains of “Climate Change” and “Physical Activity” to the framework, in this exercise, to better inform the questionnaire within the scope of the project. The previously included domain “Support for Communities” is also listed in our policy map (this is a Domain used by Canada instead of the ‘support for workforce’ domain and is explained as follows: The local government prioritises coordinated support mechanisms and resources for community-based interventions to create healthy food environments, improved population nutrition, reductions in obesity, diet-related NCDs and their related inequalities)(164).

The INFORMAS Food-EPI appraisal process uses the framework as a guide to assess a country’s progress toward creating a “best practice” food environment, not only through policy coverage but also by identifying “gold standard” policies and comparing a certain country’s policies to the benchmarks. Multiple countries have been assessed and it was due to the coverage of this framework, and its application to countries with identification of benchmarks, that it was chosen as the basis for our policy map. A European assessment is currently in process, including an appraisal of Ireland’s obesity policies and food environment. This was used as a foundation on which to build our policy map, followed by researching various sources such as the WHO, respective government websites for the Republic of Ireland, Northern Ireland and the UK and dedicated policy-related agency websites, to create our policy map.

While the survey questionnaire was being developed we could reflect on the policy map and, before the final drafting of the survey questionnaire, a check of the factors that had been included in the survey was carried out.

Some factors are difficult to incorporate into a public questionnaire about policy, such as the impact of trade agreements and the necessity of statutory public health agencies. Even so, as part of a whole package the policy map can be used along with the results of the survey questionnaire to inform potential government areas and routes for future policy intervention. However, as noted, this map is non-exhaustive and so could be used along with the questionnaire more to inform government around public support for identified interventions rather than broad areas where there are no current government policies.

## Method

Policies were identified by, first, finding the relevant government department for each of the governments and then by exploring, through any relevant search tools, any main policy items connected to that department or domain. Focus was kept on identifying the main policy, not smaller, supplementary initiatives. For the sake of simplicity, only a few policies were identified



for each point and a basic assessment was made of a policy's appropriateness at the time of writing.

## Findings

- Key policies on the island of Ireland had a broad scope of coverage of obesity policy domains, such as “A Fitter Future for All” in Northern Ireland, and “A Healthy Weight for Ireland” in Ireland.
- There were very few domains where little information could be found that relates to a policy domain. While the search was non-exhaustive, gaps in information are noted in Table 13 under the relevant policies.
- Special note should be taken about the possibility of future changes to policies in Northern Ireland due to the withdrawal of the UK from the EU.

Policies that have been evaluated and evidenced by the “EU Joint Programming Initiative’s Policy Evaluation Network” (JPI-PEN) as addressing obesity in Northern Ireland and in Ireland, respectively, according to the relevant Food-EPI domain, are presented here, using the exact Food-EPI wording. (The complete wording of each policy domain is provided later in this appendix).

## Policies to address obesity in Northern Ireland

- Food provision (PROV2): The government ensures that there are clear, consistent policies in other public sector settings for food service activities (canteens, food at events, fundraising, promotions, vending machines, public procurement standards etc.) to provide and promote healthy food choices.
- Food retail (RETAIL2): Zoning laws and policies are implemented to encourage the availability of outlets selling fresh fruit and vegetables and / or access to these outlets (e.g. opening hours, frequency i.e. for markets).
- Leadership (LEAD5): Government priorities have been established to reduce inequalities or protect vulnerable populations in relation to diet, nutrition, obesity and NCDs.
- Health in all policies (HIAP2): There are processes e.g. Health Impact Assessment’s (HIAs) to assess and consider health impacts during the development of other non-food policies.
- Monitoring and Intelligence (MONIT5): Major programs and policies are regularly evaluated to assess their effectiveness and contributions to achieving the goals of the nutrition and health plans.

- Platforms for Interaction (PLAT1): There are robust coordination mechanisms across departments and levels of government (national, state and local) to ensure policy coherence, alignment, and integration of food, obesity and diet-related NCD prevention policies across governments.

#### Policies to address obesity in Ireland

- Food Composition (COMP1): Food composition targets / standards / restrictions have been established by the government for the content of the nutrients of concern (added sugars, salt, saturated fat) in meals sold from food service outlets, in particular for those food groups that are major contributors to population intakes of those nutrients of concern.
- Food Promotion (PROMO5): Effective policies are implemented by the government to ensure that unhealthy foods are not commercially promoted to children, including adolescents on food packages.
- Food Prices (PRICES3): The intent of existing subsidies on foods, including infrastructure funding support (e.g. research and development, supporting markets or transport systems), is to favour healthy rather than unhealthy foods.
- Food Retail (RETAIL3): The government ensures existing support systems are in place to encourage food stores to promote the in-store availability of healthy foods and to limit the in-store availability of unhealthy foods.
- Food Retail (RETAIL4): The government ensures existing support systems are in place to encourage the promotion and availability of healthy foods in food service outlets and to discourage the promotion and availability of unhealthy foods in food service outlets.

Finally, it should be noted that there are several cross-border organisations and policies that apply to the entire island of Ireland.

- **safe food** is a cross-border organisation that promotes food safety and healthy eating to consumers on the island of Ireland, producing initiatives such as the “START” campaign. A proportion of their work is devoted to researching and addressing issues related to obesity.
- The Institute for Public Health, based in Dublin, has influence over public health outside of the borders of Ireland and is linked with a number of public health bodies inside and outside Ireland, in terms of partnership, research and campaigning.

Table 13: Policy “map” of Northern Ireland and Ireland policies relating to obesity, within the INFORMAS Food-EPI framework, with additional domains

Food policy domain	Food policy area	Policy in Ireland	Policy in Northern Ireland or United Kingdom
Food Composition	Food composition standards / targets for packaged foods	“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Aims to work with	<p>“Childhood Obesity: A Plan for Action” (UK): Puts forward a plan to reduce sugar and calorie consumption and regulate advertising and promotions</p> <p>“Eating Well Choosing Better”: Aims to reformulate products and shift consumer purchasing [Programme]</p>
		The policy on food composition standards in Ireland and Northern Ireland do not include reference to trans fats (trans-unsaturated fatty acids) as this is included in European Union policy.	
	Food composition targets / standards for out-of-home meals	No relevant policy found	“A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012–2022”: Aims to involve manufacturers and retailers to promote healthier eating through “Calorie Wise” scheme and “Eating Well Choosing Better” policy
Food Labelling	Ingredient lists / nutrient declarations	Included in European Union policy	
	Regulatory systems for health and nutrition claims	Included in European Union policy	
	Front-of-pack labelling	Percentage Nutrient Values: Voluntary, not interpretive [Regulation]	“Traffic Light” labelling (UK)

	<b>Menu labelling of nutrients in fast-food restaurants</b>	“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Regulations yet to be implemented	“Calorie Wise” [Scheme]
<b>Food Promotion</b>	<b>Restrict promotion of unhealthy food in broadcast media</b>	“Children’s Commercial Communications Code” [Regulation] “A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”	“A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012–2022”
	<b>Restrict promotion of unhealthy food in non-broadcast media</b>	“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”	“UK Code of Non-broadcast Advertising and Direct & Promotional Marketing (CAP Code)” rules (UK) [Regulation]
	<b>Restrict promotion of unhealthy food on social media</b>	“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”	“UK Code of Non-broadcast Advertising and Direct & Promotional Marketing (CAP Code)” rules (UK) [Regulation]
	<b>Restrict promotion of unhealthy food in children’s settings</b>	“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”	“A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012–2022” “UK Code of Non-broadcast Advertising and Direct & Promotional Marketing (CAP Code)” rules (UK) [Regulation]
	<b>Restrict promotion of unhealthy foods to children on food packages</b>	No relevant policy found	“A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012–2022”
<b>Food Prices</b>	<b>Minimise taxes on healthy foods</b>	“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Aims to promote healthy food through tax exemptions	“A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012–2022”: Aims to promote healthy food through VAT exemption (UK) [Law]

	<b>Increase taxes on unhealthy foods</b>	Sugar Sweetened Drinks Tax [Law]	Soft Drinks Industry Levy (UK) [Law]
	<b>Existing subsidies favour healthy foods</b>	No relevant policy found	“Common Agricultural Policy” (CAP) (UK): Promotes continued development of sustainable and healthy practices and foods
	<b>Assurance that food-related income support is for healthy foods</b>	“School Meals Scheme”: Only relevant to children in school [Scheme]	“Healthy Start” scheme (UK): Vouchers and tax benefits to low-income families, including “Day Care Foods Scheme” [Programme]
<b>Food Provision</b>	<b>Policies in schools promote healthy food choices</b>	<p>“School Meals Scheme” [Scheme]</p> <p>Nutritional Standards for School Meals [Regulation]</p> <p>“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”</p> <p>“Healthy Eating and Active Living Programme: National Implementation Plan 2017–2020”</p> <p>“School Fruit and Vegetables Scheme / Food Dudes Healthy Eating Programme” [Scheme]</p> <p>Social, Personal and Health Education (SPHE) curricula [Regulation]</p>	<p>Nutrition standards guidance for school lunches and other food and drinks in schools (NI)</p> <p>“Standards for School Food in England”: States minimum provisions of availability and promotes healthy eating (UK) [Guideline]</p> <p>“Food in Schools Policy: Healthy Food for Healthy Outcomes”: States minimum provisions of availability and promotes healthy eating</p>
	<b>Policies in public settings promote healthy food choices</b>	“HSE Vending Policy 2019”: Restrictions on vending machines in healthcare settings	No relevant policy found
	<b>Support and training systems for public sector settings</b>	“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Training programmes for teachers	Competency Frameworks (UK): Frameworks developed for catering, leisure and fitness settings [Framework]

	<b>Support and training systems for private companies</b>	“Healthy Workplace Framework”: Encouragement for private companies to improve employee wellbeing [Framework]	“Workplace Wellbeing Charter” (UK): Multifaceted, interactive employee wellbeing policy devised by Public Health England
<b>Food Retail</b>	<b>In-store availability of healthy and unhealthy foods</b>	No relevant policy found	“Public Health Responsibility Deal” (UK): No longer policy
	<b>Food service outlet availability of healthy and unhealthy foods</b>	No relevant policy found	“Healthier and More Sustainable Catering: A Toolkit for Serving Food to Adults” (UK): Promotion of healthier menus [Guideline]
	<b>Zoning policies place limits on quick serve restaurants selling mainly unhealthy foods</b>	“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Health and obesogenic environment considered when urban planning	Planning Act 2008 (UK) [Law] “A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012–2022”: Health Impact Assessments considered during planning applications
	<b>Zoning policies encourage the availability of fresh fruits and vegetables</b>	“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Health and obesogenic environment considered when urban planning	No relevant policy found
<b>Leadership</b>	<b>Strong, visible, political support for population nutrition</b>	“Healthy Ireland”: Overarching policy to improve national health “A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Unified obesity policy with the requirement of designated leaders and goals	“A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity 2012–2022 in Northern Ireland”: Central policy to improve population health
	<b>Population intake targets established</b>	“Healthy Ireland” “Healthy Eating Guidelines” [Framework]	“Childhood Obesity: A Plan for Action” (UK)

	<b>Food-based dietary guidelines implemented</b>	“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”	“Eatwell Guide” (UK) [Guidelines]
	<b>Comprehensive implementation plan linked to state / national needs</b>	“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Overarching obesity policy based on wide community consultation	“A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012–2022”: Northern Irish–focussed plan based upon previous policies, updated based on previous successes and consultation
	<b>Priorities for reducing inequalities related to nutrition</b>	<p>“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”</p> <p>“Better Outcomes, Brighter Futures: The National Policy Framework for Children and Young People, 2014–2020”: In the realm of childhood health, commits to tackle inequalities in vulnerable groups</p> <p><i>safefood</i>’s [public food safety body] “All-island Food Poverty Network”: Network of organisations aimed at coordinated action to improve food environments and reduce food poverty</p>	<i>safefood</i> ’s [public food safety body] “All-island Food Poverty Network”: Network of organisations aimed at coordinated action to improve food environments and reduce food poverty

<b>Governance</b>	<b>Restricting commercial influence on policy development</b>	Regulation of Lobbying Act 2015: Registers or lobbyists, code of conduct [Law]	Transparency of Lobbying Act 2014 (UK): Register, monitoring and possibility of penalties for lobbying [Law]
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	<b>Use of evidence in policies related to population nutrition</b>	<p>“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Reliance on continual evidence review</p> <p>Food Safety Authority of Ireland (FSAI) Strategy: Interlinking of various research projects, guideline developments and evidence reviews [Public body strategy]</p>	Scientific Advisory Committee on Nutrition (SACN) (UK) [Public body]
	<b>Transparency and access to government information</b>	Freedom of Information Act 2014 [Law]	<p>Public Health Agency [Public body]</p> <p>Transparency of Lobbying Act 2014 (UK) [Law]</p> <p>Freedom of Information Act 2000 (UK) [Law]</p>
	<b>Food policy prioritisation of vulnerable populations</b>	“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Focus on inaccessibility of vulnerable populations to healthy foods	No relevant policy found
	<b>Assessing the potential health impacts of all policies</b>	<p>“Healthy Ireland”: Overarching policy linked with most other health and development-related policies</p> <p>Included in European Union policy</p>	No relevant policy found
<b>Monitoring and Intelligence</b>	<b>Monitoring food environments</b>	Included in Sustainable Development policies	
	<b>Monitoring population nutrition intake</b>	<p>“National Adult Nutrition Survey”: Ongoing monitoring, with recent reports on children’s and teen’s intake, last published adults survey 2010, gaps identified in overall monitoring [Programme]</p>	<p>“National Diet and Nutrition Survey of Adults” (UK): Assessed population nutritional intake by representative sample, last report 2017, gaps identified in overall monitoring [Programme]</p>



	<b>Monitoring population body weight</b>	“Childhood Obesity Surveillance Initiative” (UCD): Monitoring of childhood obesity through representative sample, no adult monitoring [Programme]	“National Child Measurement Programme” (UK)  “Health Survey Northern Ireland”: Northern Irish-specific health survey including lifestyle and food factors [Programme]
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		“Healthy Ireland”: Annual survey of adult health measures	No relevant policy found
	<b>Monitoring of metabolic risks and diet-related NCDs</b>	“Healthy Ireland”: Aims to monitor chronic conditions linked with obesity for evaluation	“Making Life Better: A Whole System Framework for Public Health 2013–2023”: Monitoring systems in place to check response to policy
	<b>Evaluation of major programmes and policies</b>	“Healthy Ireland” “A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Ongoing evaluation through multi-year plans	No relevant policy found
	<b>Monitoring of inequalities and social and economic determinants</b>	“Healthy Ireland” “A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Review and assessment in meeting inequality targets	“Making Life Better: A Whole System Framework for Public Health 2013–2023”: Monitoring systems in place to check response to policy
<b>Funding and Resources</b>	<b>Research funding for obesity and NCD prevention</b>	Food Institutional Research Measure (FIRM) [Public body] “Healthy Ireland” “A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”	Medical Research Council (UK) [Public body]
	<b>Independent health promotion agency</b>	Institute of Public Health [Public body]	Public Health Agency [Public body]

<b>Platforms for Interaction</b>	<b>Coordination mechanisms (national, state and local government)</b>	<p>“Healthy Ireland”</p> <p>“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Overarching policy with coordination inbuilt</p>	No relevant policy found
	<b>Platforms for government and food sector interaction</b>	<p>“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Ongoing consultation with industry</p>	“Public Health Responsibility Deal” (UK): No longer policy
	<b>Platforms for government and civil society interaction</b>	<p>“Healthy Ireland”: Active, ongoing consultation with community representatives and representative populations</p>	“Civil Society Strategy: Building a Future that Works for Everyone” (UK): Provides a system by which civil society can inform government decision making, and while not specifically mentioning food decisions, does mention larger concepts
	<b>Systems-based approach to improve national food environments</b>	<p>Food Safety Authority of Ireland (FSAI) Strategy: Multi-faceted approach to food environment monitoring [Public body]</p> <p>“All-island Food Poverty Network”: Network of organisations aimed at coordinated action to improve food environments and reduce food poverty [Public body]</p>	“All-island Food Poverty Network”: Network of organisations aimed at coordinated action to improve food environments and reduce food poverty [Public body]
<b>Support for Communities</b>	<b>Implementation of social marketing campaigns</b>	<p>HSE “Healthy Eating and Active Living Programme: National Implementation Plan 2017–2020” [Programme]</p> <p><i>safefood</i>’s “START” campaign: Campaigns for both children and adults [Programme]</p>	<p><i>safefood</i>’s “START” campaign: Campaigns for both children and adults</p> <p>Public Health England “Social Marketing Strategy 2017–2020” (UK) [Programme]</p>
	<b>Food and nutrition in education curricula</b>	<p>“Healthy Eating and Active Living Programme: National Implementation Plan 2017–2020”</p> <p>“School Fruit and Vegetables Scheme / Food Dudes Healthy Eating Programme” [Scheme]</p>	<p>National Framework for Core Food Competency Skills and Knowledge (UK)</p> <p>“A Fitter Future for All: Framework for Preventing and Addressing Overweight and</p>

		Social, Personal and Health Education (SPHE) curricula	Obesity in Northern Ireland 2012–2022”: Encouraged and enhanced through local policy
<b>Climate Change</b>	<b>Responsible climate change policy with evidence of implemented action</b>	<p>“Climate Action Plan 2019 To Tackle Climate Breakdown”: Wide-ranging targets for emissions reductions, plan currently not on target</p> <p>“Project Ireland 2040: National Development Plan 2018–2027”: Incorporates targets for climate action and how actions will be implemented in line with development</p>	“United Kingdom Climate Change Programme”, including Climate Change Act 2008 (UK): Large reductions seen in emissions in recent years
<b>Physical Activity</b>	<b>Policies support physical activity across all of society</b>	“Get Ireland Active! National Physical Activity Plan for Ireland”	<p>“A Fitter Future for All: Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012–2022”: Focus on increasing physical activity of the whole population, and especially school-aged children</p> <p>“Physical Activity: Exercise Referral Schemes” [Guidelines]</p>
	<b>Active transport encouraged through government policy</b>	<p>“A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016–2025”: Guidelines to take health into account with urban planning</p> <p>“Smarter Travel”: Multifaceted initiative operated by National Transport Authority on behalf of government to encourage sustainable and active transport, including cycling and “Greenways” (trails) for non-motorised transport [Programme]</p>	<p>“Building and Active Travel Future for Northern Ireland”</p> <p>“Active School Travel Programme” [Programme]</p> <p>“Northern Ireland Greenways” [Strategy]</p>

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## INFORMAS Food-EPI Framework 2019

### Domain 1 – food composition

- Food composition targets/standards/restrictions have been established by the government for the content of the nutrients of concern (added sugars, salt, saturated fat) in industrially processed foods, in particular for those food groups that are major contributors to population intakes of those nutrients of concern (Trans fat excluded as European Union regulation)
- Food composition targets/standards/restrictions have been established by the government for the content of the nutrients of concern (added sugars, salt, saturated fat) in meals sold from food service outlets, in particular for those food groups that are major contributors to population intakes of those nutrients of concern (Trans fat excluded as European Union regulation)

### Domain 2 – food labelling

- Ingredient lists and nutrient declarations in line with Codex recommendations are present on the labels of all packaged foods
- Evidence-based regulations are in place for approving and /or reviewing claims on foods, so that consumers are protected against unsubstantiated and misleading nutrition and health claims
- One or more interpretive, evidence-informed front-of-pack supplementary nutrition information system(s) endorsed by the Government, which readily allow consumers to assess a product's healthiness, is / are applied to all packaged foods (examples are the Nutri-Score and traffic lights)
- A simple and clearly-visible system of labelling the menu boards of all quick service restaurants (i.e. fast food chains) is applied by the government, which allows consumers to interpret the nutrient quality and energy content of foods and meals on sale

### Domain 3 - food promotion

- Effective policies are implemented by the government to restrict exposure and power of promotion of unhealthy foods to children including adolescents through broadcast media (TV, radio)
- Effective policies are implemented by the government to restrict exposure and power of promotion of unhealthy foods to children including adolescents through online and social media
- Effective policies are implemented by the government to restrict exposure and power of promotion of unhealthy foods to children including adolescents through non-broadcast media other than packaging and online / social media
- Effective policies are implemented by the government to ensure that unhealthy foods are not commercially promoted to children including adolescents in settings where children gather (e.g. preschools, schools, sport and cultural events)
- Effective policies are implemented by the government to ensure that unhealthy foods are not commercially promoted to children including adolescents, on food packages

#### Domain 4 – food prices

- Taxes or levies on healthy foods are minimised to encourage healthy food choices (e.g. low or no sales tax, excise, value-added or import duties on fruit and vegetables)
- Taxes or levies on unhealthy foods (e.g. sugar-sweetened beverages, foods high in nutrients of concern) are in place and increase the retail prices of these foods by at least 10% to discourage unhealthy food choices, and these taxes are reinvested to improve population health
- The intent of existing subsidies on foods, including infrastructure funding support (e.g. research and development, supporting markets or transport systems), is to favour healthy rather than unhealthy foods
- The government ensures that food-related income support programs are for healthy foods

#### Domain 5 – food provision

- The government ensures that there are clear, consistent policies (including nutrition standards) implemented in schools and early childhood education services for food service activities (canteens, food at events, fundraising, promotions, vending machines etc.) to provide and promote healthy food choices
- The government ensures that there are clear, consistent policies in other public sector settings for food service activities (canteens, food at events, fundraising, promotions, vending machines, public procurement standards etc.) to provide and promote healthy food choices
- The government ensures that there are clear, consistent public procurement standards in public sector settings for food service activities to provide and promote healthy food choices
- The government ensures that there are good support and training systems to help schools and other public sector organisations and their caterers meet the healthy food service policies and guidelines
- The government actively encourages and supports private companies to provide and promote healthy foods and meals in their workplaces

#### Domain 6 – food in retail

- Zoning laws and policies are implemented to place limits on the density or placement of quick serve restaurants or other outlets selling mainly unhealthy foods in communities and/or access to these outlets (e.g. opening hours)
- Zoning laws and policies are implemented to encourage the availability of outlets selling fresh fruit and vegetables and/or access to these outlets (e.g. opening hours, frequency i.e. for markets)
- The government ensures existing support systems are in place to encourage food stores to promote the in-store availability of healthy foods and to limit the in-store availability of unhealthy foods
- The government ensures existing support systems are in place to encourage the promotion and availability of healthy foods in food service outlets and to discourage the promotion and availability of unhealthy foods in food service outlets

## Domain 8 – leadership

- There is strong, visible, political support (at the head of government or state / ministerial level) expressed at both national as well as international level for improving food environments, population nutrition, diet related NCDs and their related inequalities
- Clear population intake targets have been established by the government for the nutrients of concern and / or relevant food groups to meet WHO and national recommended dietary intake levels
- Clear, interpretive, evidenced-informed food based dietary guidelines have been established and implemented
- There is a comprehensive, transparent, up-to-date implementation plan linked to national needs and priorities, to improve food environments, reduce the intake of the nutrients of concern to meet WHO and national recommended dietary intake levels, and reduce diet-related NCDs
- Government priorities have been established to reduce inequalities or protect vulnerable populations in relation to diet, nutrition, obesity and NCDs

## Domain 9 – governance

- There are procedures in place to restrict commercial influences on the development of policies related to food environments where they have conflicts of interest with improving population nutrition. for example: restricting lobbying influences
- Policies and procedures are implemented for using evidence in the development of food and nutrition policies
- Policies and procedures are implemented for ensuring transparency in the development of food and nutrition policies
- The government ensures public access to comprehensive nutrition information and key documents (e.g. budget documents, annual performance reviews and health indicators) for the public
- Domain 10 – monitoring and intelligence
- Monitoring systems, implemented by the government, are in place to regularly monitor food environments (especially for food composition for nutrients of concern, food promotion to children, and nutritional quality of food in schools and other public sector settings), against codes / guidelines / standards / targets
- There is regular monitoring of adult and childhood nutrition status and population intakes against specified intake targets or recommended daily intake levels
- There is regular monitoring of adult and childhood overweight and obesity prevalence using anthropometric measurements
- There is regular monitoring of the prevalence of NCD metabolic risk factors and occurrence rates (e.g. prevalence, incidence, mortality) for the main diet-related NCDs
- Major programs and policies are regularly evaluated to assess their effectiveness and contributions to achieving the goals of the nutrition and health plans

- Progress towards reducing health inequalities or health impacts in vulnerable populations and social and economic determinants of health are regularly monitored

#### Domain 11 – funding and resources

- The “population nutrition” budget, as a proportion of total health spending and/or in relation to the diet-related NCD burden sufficiently contributes to reducing diet-related NCDs
- Government-funded research is targeted for improving food environments, reducing obesity, NCDs and their related inequalities
- There is a statutory health promotion agency in place that includes an objective to improve population nutrition with a secure funding stream

#### Domain 12 – platforms for interaction

- There are robust coordination mechanisms across departments and levels of government (national, state and local) to ensure policy coherence, alignment, and integration of food, obesity and diet-related NCD prevention policies across governments
- There are formal platforms (with clearly defined mandates, roles and structures) for regular interactions between government and the commercial food sector on the implementation of healthy food policies and other related strategies
- There are formal platforms (with clearly defined mandates, roles and structures) for regular interactions between government and civil society on the development, implementation and evaluation of healthy food policies and other related strategies
- The governments work with a system-based approach with (local and national) organisations / partners / groups to improve the healthiness of food environments at a national level

#### Domain 13 – health in all policies

- There are processes in place to ensure that population nutrition, health outcomes and reducing health inequalities or health impacts in vulnerable populations are considered and prioritised in the development of all government policies relating to food
- There are processes e.g. Health Impact Assessments (HIAs) to assess and consider health impacts during the development of other non-food policies

# Appendix 2 Personal and public involvement (PPI) and stakeholder consultations summary

## Introduction

During the creation of the questionnaire for the “Public Acceptability of Obesity Policies” survey, PPI and stakeholder consultations were performed to gain relevant stakeholder feedback on the draft questionnaire. The exercise sought the opinions of 11 people living in Northern Ireland or Ireland, either involved in the field of health, health policy or health research, or living with overweight or obesity. Eleven people responded. The exercise was performed between December 9, 2019, and January 15, 2020. The final breakdown of participants is provided in this appendix. Their individual responses and the changes made based on each consultation are itemised in full later in this document (under the subheading “Individual consultation participants’ responses and changes made”.)

## Breakdown of PPI and stakeholder consultation participants

### Northern Ireland

Health Policy: 2 participants – Health Development Policy Branch of the Department of Health

Public Health: 1 participant – Public Health Agency

Public: 2 participants – 1 working in obesity research, and 1 a patient advocate

### Ireland

Health Research: 1 participant – Royal College of Surgeons

Health Policy: 1 participant – Institute of Public Health

Health Promotion within the Government Health Department: 1 participant – Health Services Executive

Public: 3 participants – 1 a patient advocate, 2 with dependents, mixed socioeconomic status

## Methods

Participants were contacted non-randomly through contact networks. Generally, they were emailed informing about the project, why they had been contacted, what the exercise would

entail and the reason for the research. If the participants agreed to be involved they were then sent (simultaneously) the draft questionnaire document, with a general outline of how to assess the document. After a few days they were contacted again and a time was arranged for a conference telephone call to discuss their thoughts and feedback on the questionnaire. The telephone calls were recorded and the main themes of what the respondent chose to focus on, along with themes emerging in response to questioning on specified topics (listed as bullet points in this section), were paraphrased during the telephone call.

After an introduction and “small talk”, each respondent was given time to talk freely about their main thoughts on the survey. During this stage, concepts were clarified if there was ambiguity in what was being said. Following this, the specified set of themes was explored, if they had not already been elaborated on without prompting. (These are specified in the bullet point lists later in this section). The feedback was then assessed and, where applicable, incorporated into the draft survey questionnaire. Records were kept of each participant’s feedback, and what was and was not incorporated into the final survey questionnaire, and why. The summary of these was later sent to the participant for their approval.

Generally, participants provided extensive feedback. Some provided this in document form, which was later worked through and clarified by telephone; other participants’ consultations were held entirely verbally. After feedback was provided, a series of questions were asked, mainly to ensure most or all topics were covered in each feedback session. The questions revolved around

- Content and topics
- Length
- Layout, structure and flow
- Wording
- Language
- Any difficulties in understanding
- Suggestions

For those involved in policy, health or research, further questions included

- Comprehensiveness
- Further suggestions

### **Consultation results and emerging themes**

#### *Acceptability of questions, wording and design*

All participants were supportive of the work. Most believed that the survey was holistic, though some, both public and stakeholder, suggested extra topics that they would like to see explored



that currently were not in the scope of the survey. Many of these were included after discussion with the research group. Some of the suggestions for extra topics were not included, as they were too diverse, ambiguous or ambitious (for example, asking the general public if they were aware of recent scientific developments in the field). Suggestions were made for expanded policy questions, though some of these were not included as they did not relate to a potential policy or were too broad (such as asking about potential policies in every field of medical management of obesity). Survey length was a consideration when making decisions about new topics. Other topics suggested did go on to be included, such as previous weight interventions. Generally, people working in the field were happy with the wording and questions, whereas people living with overweight or obesity were more often stigmatised by the language, questions or topics.

Most participants provided extremely useful feedback, such as grammar, wording, language and questions that could be deleted, and pressed for the inclusion of “trigger warnings” (a statement made before being exposed to potentially disturbing content) and referral options in case people became upset or offended. Changes to question layout were made, following the feedback, where the questions were presented as a block of unvalidated questions.

Significant amounts of feedback could not be included due to survey tool validity (the accuracy and soundness of the survey elements and design), such as deleting individual questions in a block of validated questions, changing question meanings, adding new questions to survey tools or rearranging question order. One example was the suggestion that terms such as “unhealthy food” should be changed to “high fat” or “high sugar” foods. While valid, this was not incorporated as the research team felt that the content of the question could be interpreted differently, compromising comparability to the previous (2014) report, in which “unhealthy food” was used.

#### *Range of topics*

Many of the participants spontaneously suggested that the causes of obesity were non-exhaustive and, through the consultation exercise, multiple other areas to investigate were suggested, including endocrinology, gut flora (the microorganisms that live in the digestive system), medication and mental health, as well as the interplay between obesity, sleep, mental health and sexual health. While these were all valid points, many were not incorporated since the questionnaire research focus was on policy rather than cause and adding all the suggested causes would greatly elongate the survey. However, the topic of physical exercise was widened in keeping with the feedback from some of those consulted, such as by adding equivalent “physical activity” questions to the “assessment of diet” questions.

## Stigmatisation

Public respondents occasionally felt stigmatised by some of the questions. This was partly due to words used – some of which were altered, while still maintaining the key concept – but also somewhat due to the direction of the question. This feedback came in 2 forms:

- Feeling that the question itself was stigmatising
- The ability of the question to reinforce social stigma

Some of the respondents from the public believed that the inclusion of so many questions about individual factors that lead to obesity – though being asked to assess individual thoughts on the causes – reinforced the idea that individuals were to blame for what is a complex problem. Participants felt uneasy reading the questions, especially when this was combined with the personal questions for which they were asked to identify their own weight on a chart. However, most questions were kept for several reasons:

- The research team thought it important to capture everybody's views on this, as there are people in society who hold these views and this must be recorded.
- Based on these views, people might be more supportive or less supportive of the obesity policies, which was shown to be important in the previous survey published in 2014.
- Many of these questions were embedded within larger, validated survey tools, thus removing individual questions would interrupt theoretical validity.

Related to this, most of the respondents identified that the language of some of the questions was outdated. This was more so in the early stages, where questions had not changed significantly since they were first devised in 2011. "People-first language" was applied across the prospective questionnaire, though the feeling remained for some of the respondents, particularly those living with obesity. Language and social norms evolve quite quickly, and merely copying questions from studies that are up to almost a decade old did produce feelings of outdatedness. While the researchers tried to reduce this, there was only so much that could be changed in the questions without affecting the underlying concept. One of the main aims of this project is comparability with the previous (2014) survey and, therefore, altering questions too much was to be avoided, even if some of the questions may be classed as offensive or paternalistic (restrictive or controlling).

Most of the factors that people considered stigmatising were able to be remedied, to an extent. For example, initially the questionnaire was presented as a series of blocks of questions without an explanation as to the content of the upcoming section. This was problematic, with a participant stating they felt stigmatised by the questions, making their own conclusions that

the questionnaire was discriminatory, expecting overweight participants to answer demographic questions in certain ways, providing explanations as to why they may be living with obesity. To address this thorough introductions were written for most sections, explaining the content of the section, the reason for asking and the need for comparability, and that there are no implicit assumptions being made by the researchers. The research team attempted to emphasise that the questions are asked in order to test the breadth of all relevant factors within a reasonable timeframe and that, although questions may feel stigmatising, it is important to ensure all opinions are captured as accurately as possible.

#### Related commentaries outside of the scope of the survey

The consultation exercise revealed many significant factors in the policy environment across the island of Ireland and personal experiences that were outside of the scope of the survey. For example, some participants mentioned the major issues they had encountered with policy implementation across the island and interconnectedness of the health service. Public respondents noted this was a significant barrier in getting efficient healthcare and highlighted their distrust of policies to make efficient change to society. Some made very illuminating comments about society at large. Many of the respondents living with overweight or obesity shared personal stories of stigma and discrimination. It was helpful to hear personal stories, to realise the power of capturing people's experiences and opinions, particularly of using the health service and of stigma and discrimination. The sharing of personal stories framed the utility and direction of the questionnaire within its wider societal context and emphasise its public health aims.

There is much that could be investigated outside of the questionnaire into the social and policy environment in the obesity context across Ireland and Northern Ireland. Thorough investigation into social stigma and discrimination, healthcare provision, service, efficiency and interconnectedness and policy implementation could greatly improve the experience of people living with overweight and obesity on the island of Ireland. These are outside to scope of the current survey but they remain areas of great relevance and usefulness in public health and health policy. There is potential for subsequent surveys or reports to look at these factors.

Some participants who worked in policy gave warnings about the power of these sorts of studies. One participant suggested that the public often do not realise the complexity of health, policy and implementation and, through surveys such as this, shallow assumptions may be made about policy support. They suggested that making people choose certain answers may force certain results, which in the end could affect policy negatively, contrary to what evidence may show. They warned, "Be careful what you wish for".

### Actions taken following feedback from consultations

Widespread changes were made following the stakeholder and PPI consultations. Broadly, these included

- Grammatical corrections
- Logical reformatting
- Updated language to people-first language
- Making wording changes to questions, where allowable, to
  - Clarify concepts
  - Reduce stigmatising language
- Providing explanatory clauses on
  - The need to capture all opinions
  - The neutrality of the researchers
  - The nature of some questions being stigmatising
- Addition of a limited number of the suggested questions, relating to
  - Physical activity measures
  - Previous interventions for weight management
- Deletion of questions identified as particularly problematic, stigmatising or irrelevant, relating to
  - Identification through drawn pictures

### Research team consensus on final survey questions

By the time of completion of the consultations, there were still a number of questions pending possible incorporation into the survey questionnaire. A research team meeting was held to discuss these questions and relate them to the rest of the survey, the evidence from the previous (2014) survey and public policy, the island of Ireland context and suggestions about new areas to explore in the questionnaire. The research team comprised of the UCD and QUB researchers, Dr Helen Croker from UCL and Dr Emily Heery from the Oireachtas (the National Parliament of the Republic of Ireland).

In general, the topics and questions discussed at this meeting related to

- Proper use of people-first language
- Expansion of stigma questions
- Inclusion of questions reviewing the sugar-sweetened drinks taxes in each jurisdiction since implementation
- Deleting stigmatising questions

- Altering questions based on available evidence of policy efficacy
- Questions about minor changes to individual questions

A decision on each of these outstanding issues was reached by consensus and changes to the survey questionnaire were made accordingly. A summary of the from the meeting are provided later in this appendix.

#### Pilot testing of survey questionnaire

Following the research team’s consensus meeting, the questionnaire was finalised before being sent to SMR (Social Market Research, Wellington Park Business Centre, Belfast) for pilot testing. After initial pilot testing with 10 people, further reductions were made to the questionnaire length by deleting the questions and statements:

- How often do you consume breakfast over a week?
- How often do you consume at least 2 portions of fruit a day?
- Which type of bread do you usually consume?
- Which type of milk do you usually consume?
- In a normal week, how many hours per week might you spend on exercise where you were breathing faster than usual and your heart was beating faster?
- How much time do you usually spend watching TV, DVDs and streaming services (such as Netflix®) per day and using social media?
- Most people with obesity could lose weight if they tried. (“Stigma” section.)
- People with obesity care about their appearance as much as anybody else. (“Stigma” section.)
- I think public health campaigns over-simplify the causes of obesity. (“Stigma” section.)
- What is the best characterisation of your daily occupation?
- During the last 12 months, would you say you had difficulty paying the bills at the end of the month?
- During the last fortnight, was there ever a day (i.e. from getting up to going to bed) when you did not have a substantial meal due to lack of money?

Edits were also made to the preambles (explanatory introductions for the questions), and any unnecessary or optional sentences or text blocks were removed.

The second stage of the pilot study was conducted using the revised survey with a further 20 people: 15 in Dublin and 5 in Belfast. The survey was still deemed to be too long, so further reductions were made, including deleting the questions and measurements:

- Thinking about your own health, please rate how serious a risk you consider each of the following to be for your health ...
- Are you aware of any government policies or initiatives in the last 5 years to reduce the rates of people with obesity?
- During the last fortnight, was there ever a day (i.e. from getting up to going to bed) when you fed your children instead of yourself because of money?

Following the deletion of these items, and a final cleaning of the written blocks of text, the questionnaire was sent to SMR for coding to be rolled out in the representative survey.

Individual consultation participants' responses and changes made

### **PPI and stakeholder consultations – Respondent 1**

“Respondent 1” were 2 males working in government health policy in NI.

Their overall thoughts on the survey were that it was comprehensive and, although long, was broken up by different types of questions, with a good mix of different types of questions. They thought the sections were structured well, with the questions starting generally and then becoming more specific. They thought that all the questions were easy to understand, besides a few typing errors, and could not identify anything they thought was particularly stigmatising with no option to refuse to answer. They thought the policy sections were also comprehensive and said that they will be interested in the outcomes of the survey and getting a lot of valuable information that they will be able to use in their work.

Feedback that they provided that was incorporated into the survey questionnaire included

- Question about “how serious a problem obesity is for society” answer scale reversed, in keeping with the questions around it
- In the question “The Government should reward companies for healthy food innovations”, “reward” changed from “award”
- Typing error “adverting” changed to “advertising” in “Views of policy interventions” section
- Column headings added to health risk scales, as column descriptions had been missing
- Question about health coverage in demographic questions made applicable to just the ROI
- GCSE and “A” Level academic qualifications added to educational attainment question to cover NI equivalents

Feedback that was not incorporated included

- Changing table formatting, as this will be dealt with when the survey is made into electronic form
- Removing potential to allocate funds to policing and housing, and adding a “125-pound” option to the same question, as this question went on to be deleted
- Number formatting queries, as many of these had been fixed
- Changes to questions “There should be an additional health charge for those presenting with obesity” and “There should be health insurance price reductions for those of healthy weight” were not changed, as they were kept intact for comparability with the 2014 survey

### **PPI and stakeholder consultations – Respondent 2**

“Respondent 2” was a female working within public health, specifically obesity prevention, in NI. Her career started in law, moving into social equality and then into public health. She had extensive experience in the field and with policy formulation and implementation.

She provided many valid points for inclusion and consideration in editing the questionnaire. Generally, she was very supportive of the work and interested to see the outcomes of the work. A lot of her feedback revolved around the wording and meaning of questions and the reason for inclusion of certain questions. She thought that the breadth of topics included was good but also suggested there should be more questions on physical activity. She thought the survey was long, and that its length may make it hard for the research company to recruit employed or busy people. She thought the layout was good, especially as it will involve an interviewer, and she had no issues with the language used. Unfortunately, she noted her interest in a number of questions that had since been deleted because of length concerns (such as the “picture” questions and the “tax allocation” question).

Important points from the consultation that were incorporated into the questionnaire included

- Standard approach to people-first language
- Providing further introduction at the start of the survey as to why the research is being conducted and how it will be used
- Changing a question to “Obesity represents a serious health issue to our society” as it was unclear whether it referred to obesity as an independent condition or a problem, and the following question implies its significance independently
- Changing the preamble at the start of “Views of policy intervention” to say “responsibility for obesity in society”, as “community” was too vague

- Next preamble changed from “policy interventions” to “policy actions”, as people may not understand the use of the word “intervention”
- Deleted doubled-up question about regulation of workplace meals
- Question about subsidising employee health programmes “to train their employees” changed to “to support their employees”
- Question about menu nutritional information changed from “in menus” to “on menus”
- In the last section of “stigma and discrimination” questions, extended preamble to emphasise it is a *personal* opinion
- “Fizzy drinks” added to preamble about sugar-sweetened beverages
- Question on fruit intake changed to “at least 2 portions”, to be more clear
- “Profile information” preamble extended to emphasise confidentiality
- Adding clarification in employment demographic questions about what “on leave” means, done by providing an explanation to SMR so they could clarify in person

Feedback that was unable to be incorporated because of tool validity included

- Changing question about immediate satisfaction to “immediate satisfaction over future health benefits”
- Changing question “Being overweight is something you inherit from your parents”, as another question refers to genetics; however, it was felt that multiple questions on similar topics to test reliability are needed
- Separating “supermarkets” and “restaurants” in a question about the availability of unhealthy food
- Changing “restricted lifestyle”, as changing the question might alter the meaning
- Deleting 1 of the 2 questions about working with industry and imposing on industry to improve nutrition
- Question about 30 minutes of exercise for children, as changing could impact meaning
- Changing “breastfeeding” question

Feedback that was not otherwise able to be incorporated in the survey questionnaire included

- Changes to question “People have to deny themselves a great deal to avoid obesity” to focus



- more on prevention, as it was kept the same for comparability.
- Separate question about availability of healthy food at places where food is sold, as this is covered in other questions in other ways, or can be inferred.
- Table formatting, as the questionnaire will be converted to an electronic format.
- Changing of the “150-euro allocation” question as people “always want more policing”, for example, and would almost never pay for changes to healthy food. She was, however, quite interested in the outcome of this question but, unfortunately, it was later deleted.
- Changing stigma questions from “you have felt” to “have you felt”, as the sentences flow better when speaking with the original wording.
- Re-adding a question about whether obesity can lead to other chronic diseases, as this had previously been deleted to reduce length and can be inferred from other questions.
- Changing scale of “food industry” and “government trust” questions, as these questions had been deleted.
- Adding extra question about banning sponsorship of adult sports events.
- Changing “tax rise / tax cut” question to just “tax rise”, as this question was later deleted.
- Adding “social media” into question on how much time is spent per day watching TV, DVDs, streaming services, as this question was later deleted altogether due to length concerns.

### **PPI and stakeholder consultations – Respondent 3**

“Respondent 3” was a female member of the public living with overweight or obesity in NI. She was a doctoral (PhD) student working on improving obesity communication in healthcare settings. She had an extensive background in working with online teaching resources for health professionals. She had quite an extensive knowledge of the literature and policy environment. She had a personal history of living with obesity. She had no dependents.

In general, she thought the scope of the questions was good and that topics included were holistic. Her knowledge of the literature meant she knew why scales had been included in full but also knew that scales were quite dated. She thought the survey was long but could not identify much that could be easily deleted. She (very relevantly) added that the “Scottish Attitudes Survey” had tested similar topics and that she believed that the report related to this survey had made inappropriate leaps between answers to questions and policy recommendations, still focussing on individual blame as it is easier to target than social determinants of health – “falling into the ‘individual responsibility’ trap”. She warned against

making inappropriate connections between our findings and the outcome recommendations and urged the research team to look at the questions through an expected outcome policy recommendation to test whether they should be included. We also both acknowledged that, due to their age, the survey tools were not in keeping with the latest scientific findings. She thought that looking through the policy lens and acknowledging the age of the survey tools would increase credibility when publishing.

She also made note of the literature showing that internalised weight bias from people living with obesity was a well-established topic and possibly an area we could explore further in our survey, as it could be a policy target. She also mentioned that she thought *safefood* did an annual nutrition survey, which could be used to supplement some of the nutrition questions.

Some of the feedback she provided that was incorporated into the survey included

- Generally replacing “people with overweight” with “people with obesity” or “people become overweight ...”, citing that this was more direct and less stigmatising
- Adding a general guideline at the start of each category stating how long it will be (to initial drafts; not able to be incorporated into electronic surveys)

Some of her feedback was unable to be incorporated, including

- Replacing nutrition questions with annual survey findings, as there was no annual, relevant
- Irish survey. These questions were later deleted, anyway, due to time considerations.
- Changing BMI scale pictures, as there were later deleted entirely.
- Deleting the question “People become overweight because they value more immediate satisfaction compared to future health risks”, as this was part of a validated tool.

#### **PPI and stakeholder consultations – Respondent 4**

“Respondent 4” was a female member of the public living with overweight or obesity in Northern Ireland. She was an advocate and patient of obesity services and had a bachelor’s degree in Health Psychology.

The respondent had many concerns about the phrasing of questions and the potential of the survey to reinforce stereotypes, stigma and blaming of individuals. She highlighted that the survey does not really encompass the breadth and complexity of the causes of obesity and may promote a narrow view of the understanding of obesity.

She talked about the complexity of obesity as an issue and the variety of opinion, even within the community of people living with obesity, citing that many people blame and stigmatise themselves and others in the same community.

A notable, valid point to come out of consultation with her was that the “health language” has evolved since the last survey but, because of validation reasons, this survey is constrained to use language that is not in keeping with the latest updates in health language. Therefore, our questions may seem somewhat stigmatising, as the terms have evolved and understanding has broadened since the last survey was constructed.

Some valuable feedback that she recommended be incorporated, and which was, included

- “Trigger warning” for those with eating disorders. After being written, the trigger warning was checked with her and she approved of the wording and incorporation of helpline numbers.
- Changing of the term “ideal weight” to “healthy weight” in keeping with feedback with other respondents.
- The table referring to medicalisation questions was rearranged (as it was unvalidated), with questions on specific management being grouped together and the table being split between management options and views on health. Some of these questions were later deleted, however.
- Question on “access to specialist treatment” deleted as not available in NI, not relevant to healthy weight people, and will likely tell us little.
- Formatting error that skipped making a question “7”.
- Deletion of questions where people pick answers based on pictures, as these were stigmatising.
- Removing “obese BMI” picture as it was seen as stigmatising. This was later deemed unnecessary in the survey.
- Removing question about accepting a “tax rise” or “tax cut”.
- Deleting question on graphic labels on high-sugar foods.

Unfortunately, many of the factors that she mentioned in her feedback were unable to be adapted, due to limitations of survey validity in borrowing questions from other validated surveys. The major categories of these were

- Reshaping questions on beliefs about obesity to focus more on multifactorial causes as opposed to individual causes, and using “open-ended” instead of “leading” questions

- Extensive expansion of the causes and treatments of obesity throughout the document as, after she had provided her feedback, the focus of the survey was placed on policy changes, and unnecessary questions in other categories were reduced
- Rephrasing policy questions about policy support to reduce the amount of individual blame language
- Rephrasing of “Attitudes towards people with obesity” questions, as the original survey intended for some of the questions to be negative
- Rephrasing “unhealthy foods” to “high-fat, high-sugar foods”, as it might change the meanings of the questions and make them narrower

Other feedback that was unable to be incorporated was

- Rephrasing question asking participants to allocate tax revenue, as this was later deleted.
- Adding a question about the role of medication in management, as many of these questions were later deleted.
- Deleting questions on charges relating to “presenting with obesity” and “tax breaks for those of a healthy weight”, as the respondent found these offensive. They were, however, specifically asked to be kept, by a stakeholder, later in the consultation process.

### **PPI and stakeholder consultations – Respondent 5**

“Respondent 5” was a female living and working in Ireland, in health research. She had a medical research position at an Irish medical institution.

She provided extensive feedback about the survey. Much of this feedback was about specific wording of questions and consistency of questions throughout the survey but further feedback was given about potential extra factors to be explored, some relating to policies enacted since the previous (2014) survey.

Feedback that was incorporated into the survey included

- Deleting “living with” throughout the questionnaire
- Clarifying in the preamble to “Section B: Views about obesity” that the explanations are given by people in general, not just people living with obesity
- Causal question updated to “There is too much unhealthy and fatty foods in restaurants, supermarkets and convenience stores”, as the question was asking about the general food environment

- Question asking about “lack of money” in people not being able to eat healthily changed to “can’t afford to eat healthy foods”
- Question changed to “People can be overweight and still be healthy”, changing from “People can be obese and still be healthy”, in keeping with wider recommendations from respondent
- Preamble to “Section C: Views of policy interventions” changed from “ways the Government might try and manage obesity” to “might help to prevent and reduce obesity”
- Preamble to specific policy question changed to include “Please note, ‘children’ refers to people aged 0 to 14” (accommodating her feedback in conjunction with other feedback received)
- “Make cheaper” added to define “subsidise” in certain questions
- Question on vending machine bans in schools changed to “vending machines selling unhealthy foods”
- Question about regulating school meal nutritional content changed to “The Government should make sure that school meals meet a healthy standard of nutrition”
- Question about regulating workplace meal nutritional content changed to “The Government should make sure that meals sold or provided at workplaces meet a healthy standard of nutrition”
- Question about imposing limits on certain ingredients in processed foods re-worded
- Policy intervention question updated to say, “Government should subsidise businesses”, replacing “firms”
- Question about food labels re-worded to include the word “understandable” (but not as the focus of the question)
- Question about industry funding government health campaigns re-worded from “cooperate in funding” to “help pay for”
- Question about government-funded healthy food information campaigns changed to say “effective campaigns”
- Question on portion sizes changed to say “restaurants and fast-food shops” instead of “food outlets”
- Preamble in “sugar tax” questions changed to “and to encourage producers to make them healthier” when talking about the reason for levies, and changes made to sentences and wording throughout

- Question about advertising restriction in public spaces changed to include “hospitals” (but not schools, as she suggested)
- Question on social media advertising to children changed from “restrict” to “ban”, in keeping with previous questions
- Questions about discrimination and stigma changed to say “about their weight, shape or size”
- Deleting questions about weight management courses and bariatric surgery, as respondent did not see the use of them
- Adding extra question about regulation of hospital meals to visitors (to which the research team added “and staff”, also)
- Adding a question on practical food preparation courses in schools
- Deleting question about advertising to children on TV, as a previous question asks about advertising to children in general
- Changing “tax rise / cut” questions to reflect interventions with evidence of efficacy (by deleting the entire section, as few policies have an evidence base)

Changes that were not incorporated, due to survey validity tools, included

- Adding questions on marketing, alcoholic drinks, non-alcoholic drinks, the built environment, medications and other health conditions to the causal questions, as this was a validated tool, and the focus of the survey was on policy interventions
- Adding and making changes to questions about the Government’s role in protecting people
- Updating causal question to “Most weight-loss diets are not effective in reducing weight”
- Causal question changes to “Most people lack the willpower to eat healthily or exercise regularly” from “to diet”, as perpetual dieting is unhealthy
- Re-wording question about breastfeeding
- Changing wording of question about “immediate satisfaction” as against “future health”
- Changing question about home delivery to “elderly and incapacitated”

Other feedback not incorporated included

- Changes to questions asking about significance of different health states on health edited to be more cohesive; for example, “being an unhealthy weight” instead of “your weight”
- Changes from “ideal weight” to “healthy weight” throughout the survey, as these terms had already been changed
- Changing question stating people with obesity are “simply born that way” to include “(larger than others)”
- Changing question “People with overweight eat whatever they want”, as changing this might alter the subject of the question, and adding qualifiers might make question more stigmatising
- Changes to question “People with obesity would be treated better by society if they lost weight”, as the question had already been clarified to include “by society”, and as testing whether people thought people living with obesity were treated differently came later in the survey
- Changing the question “A person who avoids obesity has a restricted lifestyle”, as no alternative could be found for “restricted” that kept the same meaning and maintained comparability to previous (2014) survey
- Changing question “Getting older causes people to become overweight” to reflect that weight gain in older years is good
- Question about the health system being essential changed to say, “Rates in the population”, as this was later deleted
- Deleting question on health charges for people presenting with obesity, as it may be stigmatising, and comes from an American survey tool, but was asked to specifically be included by the funding agency
- Changes to the BMI identification picture, as this had been deleted by the time of consultation
- Formatting changes, as questionnaire will be converted to an electronic form
- Changes to question about access to specialised obesity clinics, as this question had been deleted by the time of consultation
- Adding a question about the “health system improving the health of people living with obesity”, as the survey had significant time constraints
- Splitting question about “overweight and happiness” to ask about “overweight” and “obesity” separately, as the concept of overweight was made generic throughout the questionnaire

- Changing wording of question about subsidising companies who support employees in healthy eating, as the question had already been edited by the time of consultation
- Qualifying question on free air-time to healthy eating promotion with “state-run TV”, as it was thought to overly complicate the question and potentially reduce comparability
- Qualifying question on free home delivery to elderly people of healthy food with “groceries” or “takeaway”, as it could potentially reduce comparability
- Changing question about 30 minutes of exercise for children to say “play / exercise”, as this could impact the capability of the question
- Changing the question on provision of children’s play equipment to state “in all of Ireland”, as this may affect comparability by changing the focus of the question
- Updating question on “health charge reductions for those of a ‘normal’ weight”, as it had already been changed by the time of consultation
- Changing question about vending machine warnings, as this question had been deleted by the time of consultation
- Addition of questions about the “sugar tax” implemented in the ROI and in NI, as the funding agency thought this was not the focus of the research
- Changes to “billboard tax warning” question, as this had been deleted by the time of consultation
- Changes to “graphic picture warning” question, as this had been deleted by the time of consultation
- Changes to “tax allocation” question, as this activity had been deleted by the time of consultation
- Changes to second “picture” question, as this had been deleted by the time of consultation
- Changes to question about peer group’s sugar consumption, as this had been deleted by the time of consultation
- Changing question about extending sugar tax to foods to “foods containing added sugar, to encourage people to eat less sugary food”
- Question about acceptability of a tax rise or cut for free home delivery changed to ask “elderly or incapacitated”, as this question was later deleted
- Adding a question asking whether people thought obesity caused health problems, as it was thought this was adequately covered by other questions
- Adding a question about regulation of meals in direct provision centres and prisons
- Adding a question about subsidising sports equipment for low-income areas



- Adding a question on banning companies that market unhealthy foods from children's sports and so on, as it was thought there was limited use of this and limited independence of marketing companies.

### **PPI and stakeholder consultations – Respondent 6**

“Respondent 6” was a female working within the public health sector in the ROI. She had extensive experience with research and public health policy and was familiar with the current Irish health context and government policy.

General comments were that she thought the survey was quite long and that it may be worth focussing on the key components we want tested and refining these, and then putting less preference on other factors. She suggested framing the overall study as either an investigation of the causes of beliefs or support for solutions but also stated that the general public, in her experience, often do not understand the complexity of health and health policy and do not necessarily understand the policy responses. She warned us to “be careful what you wish for” in asking the questions we have, as inclusion of certain questions may lead to certain assumptions and to change in government policy that is not necessarily evidence-based. To this effect, she recommended cutting down on the number of policy options and focussing on broad policy themes, rather than specifics, and focussing generally more thoroughly on causes than solutions. She encouraged rearranging the survey so that the most important dependents were tested first and thought demographics should maybe come first, so that people are not feeling stigmatised after reading a cache of obesity statements and then being asked to tell us about their own weight. However, later, the research company thought, in their experience, it was better to test at least some of the demographics at the end.

She provided many insights into how to phrase the survey, and phrases to include and discard, and these were included in the survey in the following ways.

- Widespread general updates throughout the survey on sentence length and content, such as aiming for sentences of around 10 words with 1 idea
- Plain English introduction as to what is meant by obesity, and more introductions
- Focus shifted in sentences from asking for information of the respondent to hearing and understanding information about their beliefs
- Extra sentences added to avoid feelings of judgement and to encourage respondent honesty
- Demographic information was placed first to (hopefully) increase accurate responses but this was overridden in later updates

- Alteration of questions on “treatments of obesity” to be worded more subtly; however, these were later deleted completely
- Changes to the introductory sentence of “Section B: View about obesity” around “states protecting citizens to be more neutral”, from “how far to let individuals go” to “balancing individual responsibility with government”
- “Physical activity” question re-worded (from “physical exercise”) and simplified
- More extensive options for “if people with eating disorders are encountered” and who they can contact
- Extending the topics asked about to also test
  - The degrees to which people feel they can speak about their weight and to whom (for example health practitioners, friends, family) and potentially cross-tabbing this with their self-reported weight status
  - Public perceptions of “body positivity” and whether they think this is inclusive or unhealthy

Feedback that was unable to be incorporated due to constraints of validated survey tools – but still noted as very useful thoughts – included

- Splitting surveys into questions about “children” and “adults”
- Reducing the number of questions and reshuffling questions from the previous (2014) *safe food* report
- Re-phrasing of “breastfeeding” question

Other factors not able to be incorporated included

- Interplay between obesity, mental health, self-esteem and sex life, as, while worthy of investigation, the questionnaire is focussing more on policy actions
- An adapted survey scale to test unconscious weight bias (possibly based on similar racism scales)
- What people feel could be done to help people talk more openly, seek help, feel better and take action.

### **PPI and stakeholder consultations – Respondent 7**

“Respondent 7” was a female working within health promotion in the HSE. She was originally from the ROI and had a background initially in nursing, moving into health promotion 15 years prior.

Overall, she thought the questionnaire was clear, self-explanatory and logical. She did not identify any major language deficits and thought the questions were non-stigmatising and

easy to understand. She did acknowledge that the survey was long but thought the main hurdle would be recruiting people to take part, rather than keeping them once they had agreed to do so.

A major point she raised was the extent of the survey asking about the food environment over other factors, which other consultations had also raised. She did highlight, however, that current Irish policy focusses on the food environment *and* physical activity strongly and the draft questionnaire focussed much more heavily on the food environment. She recommended adding more “physical activity” questions to the “Health and wellbeing” section.

Points she mentioned that were incorporated into the survey included

- Re-wording “physical activity” questions to be in keeping with standardised measures. Unfortunately, however, due to time and comparability constraints, this was unable to be realised.

Points that she raised that were not able to be incorporated included

- Re-wording the question on “international recognition of obesity as a disease” to say “chronic disease”, as this question had been deleted from the survey

### **PPI and stakeholder consultations – Respondent 8**

“Respondent 8” was a female member of the public from the ROI living with overweight or obesity, including a history of bariatric surgery. She had a post-Leaving Certificate level of education. She had had a mixed career, including swim teacher and taxi driver. She had no children. She was very active as an advocate in the community and had a vast amount of experience in dealing with societal weight stigma, because of her role as an advocate.

Most of the feedback that she provided was in detecting ambiguous questions. She also noted certain questions that read strangely or were potentially offensive. She suggested many ways that certain questions could be improved. She acknowledged that the survey was long but quite liked the topics included, especially the “stigma and discrimination” questions. She said that, once one learned how the survey was structured, it became quite fast to fill out.

A great insight she provided is that she acknowledged, at certain parts of the survey, when reading through it, that she had a natural response of feeling blamed and becoming defensive. To quote her, “Everybody is vulnerable in their own way, and not everybody [who does the survey will be] (is) clued into why they are vulnerable”. She felt that a tone of accusation pervaded a lot of the questionnaire and, while she was not sure exactly where this was coming from, she felt that asking a host of questions about causes of weight and stigma and

then asking about educational and work status was problematic. She stated that she felt stigmatised into thinking the researchers were expecting people with obesity to answer in certain ways, such as in “education” questions, stating she felt the questions were “trying to justify how clever or successful you are”. We discussed this thoroughly, and she said this may be helped by altering the format, breaking up the questions slightly and explaining more thoroughly about why certain questions are being asked. She also mentioned a lot of the internal stigma that people living with obesity may have, filling themselves with a “sense of failure”.

The feedback that she gave that was incorporated into the survey included

- Changing “why people living in Ireland are obese or overweight” to “may be overweight”.
- Changing “ideal body weight” in keeping with other feedback received, for example to “healthy body weight”. This turned out to be quite a significant issue for the respondent, as she had personal experience of being encouraged to be an “ideal weight”, despite losing large amounts of weight to the point where people thought she was sick, yet still not becoming an “ideal weight”.
- Changing question on having money to pay for food and exercise to refer to all of society, as question was ambiguous.
- Question on people being treated better if they lost weight changed to refer to “by society”, to clear up ambiguity.
- Multiple changes in stigma questions from “based on weight” to “because of your weight”, as she thought this was better, clearer, wording.
- Amending typing error in question about right to healthcare from “received” to “receive”.
- “How would you rate your health in general?” question changed to “How would you rate your overall health, all things considered?”, as she thought the original text was ambiguous.
- Add further clarification as to why demographic questions were being asked, and further emphasis that they are used to ensure representativeness and comparability, in a non-judgemental way.

Feedback unable to be incorporated included

- Altering the question “Governments should put limits on the choices individuals can make so they don’t get in the way of what’s good for society”, as the respondent was not sure how an individual could “get in the way”, leading to questions about social morality and existentialism, because, even so, the wording was testing a very specific thought pattern.
- Changing question around people not being able to afford to exercise regularly as no alternative could be found that did not change the meaning of the validated question.
- Altering question about people living with obesity being as happy as people with a normal weight, as this question was deleted.
- Changing the question “There should be an additional health charge for those presenting with obesity”, as it was stigmatising and she said people do not “present” with obesity. Initially this question was deleted entirely but a stakeholder later petitioned for its re-inclusion.
- Changing question about text warnings on vending machines because it did not sound right grammatically. This question was later deleted.

#### **PPI and stakeholder consultations – Respondent 9**

“Respondent 9” was a male member of the public living with overweight or obesity in the ROI. He was married and had grown-up children who had left home. His highest level of education was a trades certification and he was a retired tradesperson. He had had extensive interaction with the health service, including for issues related to weight. He had undergone bariatric surgery previously.

Many of the feedback points that he made related to ambiguity in questions and he pointed out many examples of questions that could be read in a way that was different to the intention of the question. He was mainly doing this to play “devil’s advocate” (presenting an opposing view for the sake of argument or examination), saying that the majority of people will respond in the intended way but that a minority of people may have a completely different interpretation. He also highlighted how different the responses for a lot of the questions about healthcare provision and beliefs about obesity will differ greatly between those with a healthy BMI and those who have overweight or obesity. The overall feel was that many of the questions were subjective enough to worry him.

He made a grim assessment of the current obesity management landscape in the ROI.

Points that were able to be incorporated into the survey after receiving his feedback included

- Moving questions about physical exercise so they are next to each other.
- Question about surgery as a treatment for obesity changed from “bariatric surgery” to “surgery”, as he believed most people would not know the term “bariatric”. This question was later deleted completely.
- “Sports equipment” updated to “relevant sports equipment” in question on tax break to encourage exercise, noting “golfing equipment and Formula 1 cars” were probably not reasonable.
- No change was made at the time but he pointed out that participants might respond differently in question on allocating 150 euro because of income, and this might be an area to explore when data is received. He pointed out, similarly, that people who may be overweight but who may not class themselves as such might respond differently to people who believe different, which might also be worth exploring. Eventually this question was deleted, anyway.
- “Prefer not to say” added as a negative option in “income” question.
- A question was added in the “Profile information” section about previous obesity treatment, after the question on “height and weight”, as he stated that current BMI may not be reflective of previous status.

Some of his feedback was not able to be incorporated due to survey tool validity restrictions, such as

- Breaking the first 2 blocks of questions into smaller sections
- Changing “never consume bread” and “never consume milk” to “rarely / never”, to capture people in the grey area. However, specific written instruction was given to the research company as to how to answer if people do “rarely” eat bread
- Changing “People with overweight need more medical care” to “require more medical care”
- Clarifying some of the ambiguous questions he pointed out, such as “Most people lack money to eat healthy diets” and “[People] are unable to buy healthy food close to their home”

Some of his feedback was unable to be incorporated, particularly around ambiguous questions, as there was no reasonable way to test the confounding factors, such as

- Farmers supporting fruit and vegetable subsidies for financial reasons

- Issues around policy implementation in Ireland

#### **PPI and stakeholder consultations – Respondent 10**

“Respondent 10” was a female member of the public living with overweight or obesity in the ROI. She was currently not working though not unemployed as she had suffered a work accident and her employer, while keeping her an employee, was unable to find appropriate work that she could fulfil. She was a university graduate. She had a daughter. She described a long history of suffering discrimination and stigma and mentioned some particularly scarring events in her encounters with the health system. She had ongoing struggles with accessing efficient weight management services, particularly with her daughter.

She provided extensive feedback on the draft questionnaire. The main feedback points from our discussions that were able to be incorporated into the survey were

- Changing of “ideal weight” and “normal weight” to “healthy weight” throughout the questionnaire.
- Addition of a question to “Section D: Views around people with obesity in society” about awareness of government policies and initiatives. Unfortunately, this was later deleted due to time constraints.

Feedback not able to be incorporated into the questionnaire, mainly because of the focus on policy, and due to length concerns, included

- Links between obesity and mental health, sleep health, endocrinology and gut flora
- Public awareness of new scientific findings about the complexity of obesity
- The effects of taxes recycled into weight management programmes, after-school activities and subsidies for those on low incomes
- Whether it was OK in society to talk about someone’s weight

During our consultation, she mentioned particular experiences within the Irish health system context that framed the way she thought about the research:

- She highlighted the (sometimes) lack of interconnectedness of services, and difficulty accessing services, including location.
- She believed that the public would be against classifying obesity as a disease due to a widely held belief that obesity would then be treated as “an excuse”. She pointed out, however, that, as a person living with overweight or obesity, this classification would do the opposite: it would help give a further insight into the complexity of the

condition and, therefore, a context from which to explore management, not to believe that they are free of blame.

### Guide given to respondents about how to assess draft questionnaire

“Attached is the questionnaire I had mentioned in my previous emails. As said, this questionnaire will be given to about 1,000 people across the island, so we want to make sure it is as accurate, thorough, user-friendly and correctly worded as possible.

The purpose of us sending it for your opinion is not for you to complete the survey questions, but to look over the way we have structured the questions, worded certain questions, the things we have included and the concepts we have discussed. Having said that, while looking at the document, if you could consider the following factors, as longer versions of these will be what I ask you when we talk on the phone, that would be excellent:

- The topics included
- Number of questions / length
- Structure
- Wording – both in terms of how easy it is to understand, and the way we have said it (e.g. People-First Language)
- Any parts difficult to understand

Take your time, and when you're happy that you have a good overview of the document, and have some time free, let me know and we can arrange a time to have a phone call. Alternatively, if I don't hear anything back, I'll contact you through email sometime in the coming weeks. Ideally, if possible, I would like to have collected your feedback by phone call before Christmas, but if this isn't possible, let me know.

Let me know if you have any further questions. Good luck with the document, and again, a massive thank you for helping us out. Your feedback will help us produce the best survey we can to try and improve the health of the entire island, so thank you for your willingness to help out with our research.

I'm always happy to be contacted if you need anything.

Thank you”

### Summary Minutes from Research Team meeting to discuss questionnaire questions and PPI and stakeholder feedback – January 17, 2020



Extensive changes were made following this meeting. In reference to pending questions after the PPI for discussion, those that went on to be discussed at the research meeting, and their outcomes, are given here.

- How to phrase questions “person with overweight” etc., that uses people-first language, is grammatically correct, does not change the meaning significantly, maintains comparability and is consistent in questionnaire

Outcome:

- Treat obesity as a disease, e.g. “people with obesity”
- Keep word “overweight” but consider changing to make grammatically correct
- Add preamble at the start of the section explaining what is meant by the terms
- Side discussion about question from section “Views about obesity” about “immediate satisfaction compared to future risks” that had been changed from “compared to future benefits”

Outcome:

- Change back to original wording for comparability and flag with SMR
- Change of question from section “Views about Obesity” stating “being overweight is something you inherit from your parents”, as the utility of more than one genetics question was queried during the PPI

Outcome:

- No change as survey tool is meant to test the same thoughts multiple times to check consistency of respondent thoughts
- Adding a question about restricting sponsorship at sporting events focussed on adults to join current question about restricting sponsorship of “children organisations, events and sporting teams”

Outcome:

- No question added in regard to this as the topic of adult sports was considered too broad and did not seem as important as asking about children’s events
- Adding to the stigma sections questions about talking about weight, public perceptions about body positivity, unconscious bias and what could be done to help people talk more openly
- Outcome: Add question about talking to healthcare professionals about weight
- One question added about public acceptance of body positivity in advertising

- No further questions about stigma as already tested
- No questions about what could be done to help people talk.

Altering the question “Governments should put limits on the choices individuals can make so they don’t get in the way of what’s good for society”

Outcome:

- No change to question but emphasise with SMR that this is not the view of the researchers and there are no right or wrong answers

Changing the question “There should be an additional health charge for those presenting with obesity”

Outcome:

- Consider deleting as it is not a policy that would be considered and had very low support in the previous survey
- Consider deleting succeeding question about charging less for people of a healthy weight

Adding a question about the public’s awareness of new scientific findings about obesity

Outcome:

- Not included as the topic is massive and this survey focusses on policy

Adding a question about whether it is OK to talk about someone’s weight

Outcome:

- Not included, not added as too ambiguous

Re-adding a question about links between obesity and other chronic diseases

Outcome:

- No change as multiple questions already ask about the links between obesity and health

Expanding question about nutritional regulation of meals from schools and workplaces to hospitals, direct provision centres and prisons

Outcome:

- Add question focussing on what can be bought in hospital (exclude hospital-provided meals to patients) for visitors and staff by way of healthy environment example
- No questions about direct provision or prisons, especially not together

- Consider splitting question primary and secondary schools (after discussion below)

Side-discussion based on previous point about vending machines in schools

- Dr Roisin O’Neill and Dr Helen Croker thought that there is already a strong policy in place for Northern Ireland and that there may be a significant difference currently, and in opinions, between primary and secondary schools
- Dr Emily Heery recommended reviewing the “Report on Tackling Childhood Obesity” by the Oireachtas (2018)

Outcome:

- Re-word question about regulation in schools with vending machines to specifically state it includes secondary schools

Second side-discussion based on previous discussion about the inclusion of “schools” in question about restricting advertising in public spaces

Outcome:

- Delete “schools” from inclusion in question “... restrict advertising for unhealthy food in public spaces” as it is not considered a public space, but a regulated government / children’s space

Add a question about tax breaks for sports equipment to low income / deprived areas and people

Outcome:

- No change as likely little effect of tax breaks to people not paying much tax.

Adding question about banning companies that *market* unhealthy foods (i.e. advertising agencies) from sponsoring of children’s organisations, etc., as opposed to those that *make* unhealthy food

Outcome:

- No change as companies that market are employed to do that and have little control over what they market

Changing options in “tax rise / tax cut” section to evidence-based policies

- Discussion about programme in Amsterdam that had positive (but maybe not translatable) results

Outcome:

- Entire question deleted as it is operationally difficult and many policies do not necessarily have very strong evidence

- Deleting questions on treatment for obesity, as PPI representative 5 thought they would add little and do not represent the options available

Outcome:

- Questions “The health system is essential in helping reduce obesity rates”, “The most important treatment is weight management courses” and “The most important treatment is surgery” all to be deleted
- Check for overlap with question “People who have obesity live shorter lives”

Addition of 6 questions from PPI representative 5 about the Sugar Sweetened Drinks Tax implemented in 2018 as it is a good time to collect evidence on it

Outcome:

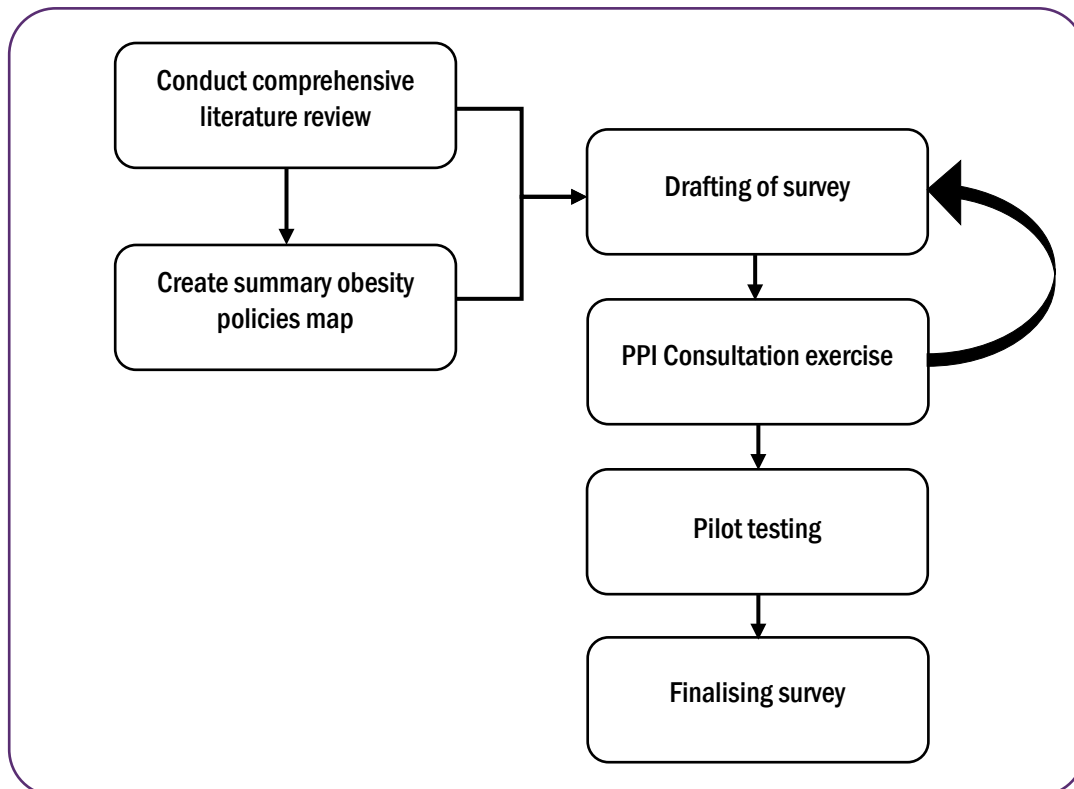
- Possibly include 1 or 2 questions such as “Do you support the tax?” and “Should the tax be extended to sugary milk drinks, such as chocolate milk?”
- Dr Mirjam Heinen stated we should look at Australian questions about support for “sugar taxes”
- Dr Helen Croker stated we should look at Institute for Fiscal Studies about their reviews of “sugar taxes”
- Should we delete some of the questions “The Government should ban advertising of unhealthy foods aimed at children”, “aimed at children on television” and “aimed at children on the Internet”

Outcome:

- Could possibly delete the question about advertising on television, as online is a new topic and could be a policy area for exploration

## Appendix 3 Stages of development of quantitative survey questionnaire

Figure 4. The stages that aided the development of the quantitative survey questionnaire to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland.



# Appendix 4 Quantitative survey questionnaire



**QUEEN'S  
UNIVERSITY  
BELFAST**

## Questionnaire

### Obesity Market Research Project



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[info@socialmarketresearch.co.uk](mailto:info@socialmarketresearch.co.uk)

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## NEW SCREEN

### Pre-amble

Hello and good morning / afternoon. I am calling you on behalf of University College Dublin and Queen's University Belfast. My name is XXXX from Social Market Research and we are conducting a survey on public opinion on obesity policies across the Island of Ireland (IoI) on behalf of UCD and Queen's.

The survey will take about 20 minutes to complete, your responses will be confidential and your rights are protected under GDPR. There are no risks in taking part. Some people may find some of the topics about weight, weight stigma and weight discrimination sensitive. If you have any concerns during the survey, please let me know. You don't have to answer any question you don't want to, and you can end the interview at any time.

The survey is anonymous and confidential and you cannot be identified by your responses. Please note that you will be asked for your personal details at the end of the survey but these details will not be linked to the answers you have given during the survey. These are purely used to make sure the survey was conducted correctly, when we carry out our quality control checks. We will also use your personal details in the event that you may wish to remove / delete your survey response at some point in the future. We will hold your details for 90 days to give you the option of removing your response within the next 90 days. As such your personal details will allow us to identify your response and remove it.

X1 Do you have any questions about the survey you would like me to answer now?

Yes	1
No	2

Once the survey is completed, I will also ask you if you would like the link to get more information on the survey which also includes the contact details of those running the survey.

X2. This call may be recorded for training and quality purposes. Are you happy with this?

(Single code)

Yes	1
No	2

## NEW SCREEN

X3. Before proceeding to the interview, I need you to consent to each of the following.

You confirm that you understand the survey is about obesity policies on the island of Ireland	1
You have had an opportunity to ask questions about the survey and these have been fully answered	1
Your participation is voluntary and you can withdraw at any time during the survey. However, after completing the survey, your anonymous data can only be removed from the database if you contact us within 90 days	1
SMR can hold your personal details for up to 90 days to support quality control	1
Anonymized data collected can be looked at by the project partners	1
That information collected can be published but it will not be possible to identify you	1

That what is discussed during the survey is confidential with the exception that if you disclose information that indicates that you are at risk of harming yourself or others, or in danger of being harmed by someone else, the researcher is legally obliged to pass on this information to an appropriate professional.	1
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---

**ONLY PROCEED TO X3 IF ALL ITEMS FLAGGED AT X2 ELSE CLOSE AND THANK RESPONDENT**

X4. Are you happy to consent to take part in the survey?

Yes – proceed with interview	1
No – thank and close	2

**NEW SCREEN**

X5. Sample point

X6. Interviewer number

X7. ENTER RESPONDENT ID NUMBER:

X8. INTERVIEWER CONFIRM RESPONDENT AGED 18+. (Single code)

Yes – PROCEED	1
No – THANK AND CLOSE	2

X9. INTERVIEWER RECORD LOCATION OF RESPONDENT (Single code)

Northern Ireland	1
Republic of Ireland	2

We would like to highlight that the views in this survey are not views necessarily held by the researchers. The opinions may also not be held by you but might be by other people and these questions are meant to get all people’s opinions about obesity as accurately as possible.

**Section A: Health and wellbeing**

The first questions are about your health and wellbeing. They are about how you perceive yourself and what you do in your day-to-day life.

A1. Overall, would you say that what you usually eat is ...? (Single code)

Very healthy	1
Quite healthy	2
Not very healthy	3
Very unhealthy	4



A2. Overall, how would you describe your physical activity level (where you get out of breath)?

Very physically active	1
Quite physically active	2
Not very physically active	3
Not at all physically active	4

A3. How easy or difficult would it be to make improvements to the way you eat? **(Single code)**

Very easy	1
Quite easy	2
Quite difficult	3
Very difficult	4
No changes necessary	5

A4. How easy or difficult would it be to make improvements to how much physical exercise you get? **(Single code)**

Very easy	1
Quite easy	2
Quite difficult	3
Very difficult	4
No changes necessary	5

### NEW SCREEN

The following parts of the survey may contain questions that some people may find upsetting. There are questions relating to stigma, discrimination and eating disorders. If you have any concerns during the survey, please let the me (interviewer) know. If you have had past experience with eating disorders and need help, we can provide contact details for help services.

### NEW SCREEN

#### Section B: Views about obesity

B1. Here are a series of explanations people in the general public give about why people have obesity or overweight. In response to each statement, could you please tell us how much you agree with the view presented, where (1) is strongly disagree and (5) is strongly agree. Please choose the number that best represents your view. **(Single code for each statement)**

Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4

Strongly agree	5
Don't know	6
Refused	7

1	Being overweight is something you inherit from your parents.
2	There is too much unhealthy and fatty food in restaurants, supermarkets and convenience stores. (shops)
3	Most weight-loss diets are not very effective
4	People lack the willpower to diet or exercise regularly.
5	People become overweight because they spend too much time driving / watching television / on the Internet.
6	People become overweight because they don't have time to prepare healthy meals.
7	People become overweight because they are simply born that way.
8	Most people who become overweight don't view their weight as a problem.
9	People become overweight because they are unable to buy healthy food close to their home.
10	People become overweight because there are too many snack foods readily available in workplaces, shops and homes.
11	People become overweight because healthy foods are too expensive.
12	People who become overweight eat whatever they want.
13	People become overweight because they don't have time to exercise.
14	People who eat too much unhealthy food do so because it costs much less than healthy food.
15	Most people in society can't afford to eat healthy foods and exercise regularly.
16	People become overweight because they lack information about healthy eating and / or health risks of excess weight.
17	People become overweight because they value more immediate satisfaction compared to future health risks.

### NEW SCREEN

B2. Please say how much you agree with these statements. (Single code for each statement)

Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5
Don't know	6
Refused	7

1	People have to deny themselves a great deal to avoid obesity.
2	Maintaining a healthy bodyweight is expensive.
3	People should maintain a healthy weight for optimal health.
4	Maintaining a healthy bodyweight is boring.
5	People with obesity would be treated better if they lost weight.
6	Maintaining a healthy bodyweight takes a lot of effort.
7	A person with a healthy bodyweight can lead a more active life.
8	Maintaining a healthy bodyweight makes life less fun.
9	People with overweight or obesity are considered less attractive.
10	People with obesity need more medical care.
11	People with obesity are embarrassed by the way they look.
12	Losing weight would greatly improve the health of people living with obesity.

13	People with obesity would have a better social life if they lost weight.
14	A person who avoids obesity has a restricted lifestyle.
15	People with a healthy body weight are taken more seriously.
16	Getting older causes people to become overweight.
17	People can be overweight and still be healthy.
18	People who have obesity live shorter lives.

### NEW SCREEN

- B3. Please say if you agree or disagree with the following statement: *“Obesity represents a very serious health condition for our society”* (Single code)

Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5

- B4. Compared to other health conditions, how serious a condition do you think obesity is for our society? (Single code)

Much more serious problem	1
More serious	2
The same	3
Less serious	4
Much less serious problem	5

### NEW SCREEN

#### Section C: Views of policy interventions

The next section refers to ways the Government might prevent and reduce obesity in the population, which we will refer to as “policy”. The following questions ask about your thoughts on different government policies. There are no right and wrong answers.

- C1. Please indicate how strongly you agree or disagree with each of the following statements where (1) represents strongly disagree and (5) represents strongly agree.

(Single code for each statement)

Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5
Don't know	6

1	The Government interferes far too much in our everyday lives.
2	Sometimes the Government needs to make laws that keep people from hurting themselves.
3	The Government should stop telling people how to live their lives.
4	It's not the Government's business to try and protect people from themselves.

5	The Government should do more to advance society's goals even if that means limiting the freedom and choices of individuals.
6	Governments should put limits on the choices individuals can make so they don't get in the way of what's good for society.

The Government have proposed and discussed a number of policy actions and we are interested in getting your views on some of these interventions.

**NEW SCREEN**

- C2. To what extent do you either agree or disagree with the following statements about government interventions where (1) is strongly disagree and (5) is strongly agree? **(Single code for each statement)**

Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5
Don't know	6

1	The Government should impose taxes on unhealthy foods and use the proceeds to promote healthier eating.
2	The Government should subsidise (make cheaper) fruit and vegetables to promote healthier eating.
3	The Government should provide vouchers to low-income families to buy healthy foods at reduced prices.
4	Vending machines selling unhealthy food should be banned from our schools (including secondary schools).
5	The Government should make sure that primary school meals meet a healthy standard of nutrition.
6	The Government should make sure that secondary school meals meet a healthy standard of nutrition.
7	The Government should make sure that meals sold or provided at workplaces meet a healthy standard of nutrition
8	The Government should make sure that meals available in hospitals to staff and visitors meet a healthy standard of nutrition.
9	The Government should work with the food companies to improve the nutritional content of processed foods (e.g. less salt or fats).

**NEW SCREEN**

- C3. **(Single code for each statement)**

Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5
Don't know	6

1	The Government should impose limits on certain ingredients (e.g. salt or fats) on food companies to improve the nutritional content of processed foods.
---	---------------------------------------------------------------------------------------------------------------------------------------------------------

2	TV stations should give free air-time to governmental campaigns that promote healthier eating.
3	There should be public measures like free home delivery to support easier access to healthy foods for the elderly and those with lower incomes.
4	VAT (Value Added Tax) rates should be lower for healthy foods and higher for unhealthy foods.
5	The Government should ban advertising for unhealthy food that is aimed at children.
6	The Government should ban advertising for unhealthy food that is aimed at adults.
7	The Government should spend money on effective campaigns informing people about the risks of unhealthy eating.
8	Education to promote healthy eating should be provided in all schools.
9	Practical education in food preparation should be taught in all schools.
10	The Government should subsidise businesses which provide programmes to support their employees in healthy eating.
11	All foods should be required to carry understandable labels with calorie and nutrient information.
12	All restaurants should be required to provide calorie and nutrient information on menus.
13	The food industry should help pay for governmental campaigns that promote healthy eating.

### NEW SCREEN

C4. (Single code for each statement)

Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5
Don't know	6

1	The Government should reward companies for healthy food innovations.
2	Children should have to participate in a minimum of 30 minutes exercise a day while at school.
3	There should be planning regulations to restrict the development of fast-food outlets in areas nearby to schools.
4	The Government should provide resources to improve exercise and playground facilities.
5	The Government should provide resources to encourage women to breastfeed.
6	There should be planning regulations to restrict the development of certain food outlets (selling foods high in saturated fats) in towns and cities.
7	There should be a ban on sales promotion and special offers on unhealthy foods.
8	Portion sizes in restaurants and fast-food shops should be restricted.
9	There should be a tax incentive to encourage sports participation, with a tax break for the purchase of relevant sports equipment.
10	There should be an additional health charge for those presenting with obesity. (X9 EQ 2 ONLY)
11	There should be health insurance price reductions for those of healthy weight. (X9 EQ 2 ONLY)

## NEW SCREEN

The Irish and UK / NI Governments have put levies and taxes on sugar-sweetened drinks (called “fizzy drinks”). Some of the following questions refer to these taxes.

C5. Please say to what extent you agree or disagree with the following statements.

(Single code for each statement)

Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5
Don't know	6

1	The Government should extend the sugar-sweetened drinks tax to include all sugary foods to promote healthier eating.
2	The Government should ban companies that make unhealthy foods and drinks from sponsoring children's organisations, children's events and children's sporting teams.
3	The Government should restrict advertising for unhealthy food in public spaces (e.g. bus stops, trains stations, hospitals, roadside).
4	The Government should restrict advertising for unhealthy food that is aimed at children on the Internet (e.g. games, apps, social media)
5	Children's height and weight should be routinely measured to monitor rates of growth in the population.
6	The Government should try and make towns and cities so that people are encouraged to be more active and healthier (such as bike lanes, parks, pedestrian areas).

## NEW SCREEN

### Section D: Views around people with obesity in society

The next section is about bias and discrimination in reference to obesity. Some refer to your personal experience (no matter what your weight is). Others refer to general attitudes in society.

D1. Have you ever felt personally discriminated against because of your weight? (Single code)

Yes	1
No	2

ASK IF D1 EQ 1

D2. The following questions are about personal experiences. Please say how often you have experienced these events in the past year. (Single code for each statement)

Never	1
-------	---

Rarely	2
Sometimes	3
Fairly often	4
Very often	5

	You have had difficulty obtaining health care because of your weight, shape or size.
	You have been discriminated by health care workers because of your weight, shape or size.
	You have been discriminated in public settings / on public transport because of your weight, shape or size.
	You consider yourself a person who has been deprived of opportunities because of your weight, shape or size.

- D3. Thinking about your own personal experiences in society, please say to what extent you agree with the following statements. **(Single code for each statement)**

Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5
Don't know	6

	You feel comfortable talking about your weight, shape or size to your GP.
	You feel comfortable talking about your weight, shape or size to your family.
	You feel comfortable talking about your weight, shape or size to your friends.

**NEW SCREEN**

- D4. I now want to ask you to what extent YOU agree with the following statements about people with obesity. **(Single code for each statement)**

Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5
Don't know	6

1	People with obesity should have the same right as everyone else to receive treatment in the health system.
2	Most people with obesity are self-conscious about their weight.
3	People with obesity cannot be good workers compared to people with a healthy weight.

- D5. Thinking about the communication of messages relating to obesity, please say to what extent you agree with the following statements. **(Single code for each statement)**

Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5
Don't know	6

I think the media promotes negative stereotypes about people with obesity.
I support advertisements purposely including people with obesity.

### Section E: Profile information

We would like some background information about you. This is a critical part of our analysis so we can sure we take into consideration people of all backgrounds.

E1. Are you ...? **(Single Code)**

Male	Female	Non-binary	Prefer not to say
1	2	3	4

E2. What was your age on your last birthday? INTERVIEWER RECORD AGE:

E3. How would you rate your overall health, all things considered? **(Single Code)**

Very bad	1
Bad	2
Fair	3
Good	4
Very good	5

E4. How tall are you? **(Single code)**

Respondent answered in feet and inches	1
Respondent answered in metres and centimetres	2
Refused	3

#### ASK IF E4 EQ 1

E5a. INTERVIEWER RECORD IN FEET AND INCHES:

Feet	
Inches	

#### ASK IF E4 EQ 2

E5b. INTERVIEWER RECORD IN METRES AND CENTIMETRES:

Metres	
Centimetres	

E6. What is your weight? **(Single Code)**

Respondent answered in stones and pounds	1
Respondent answered in kilograms	2
Refused	3



**ASK IF E6 EQ 1**

E7a. INTERVIEWER RECORD IN STONES AND POUNDS:

Stones	
Pounds	

**SK IF E6 EQ 2**

E7b. INTERVIEWER RECORD IN KILOGRAMS:

Kilograms	
-----------	--

E8. Have you ever had a medical treatment for weight issues (such as medication, counselling or surgery)? **(Single code)**

Yes	1
No	2

E9. What is your marital status? **(Single code)**

Single (never married)	1
Married	2
Civil Partnership	3
Divorced	4
Domestic partnership (cohabiting but not married)	5
Separated	6
Widowed	7
Prefer not to say / refused	8

E10. Are you currently in full-time education? **(Single code)**

Yes	1
No	2

**ASK IF X9 EQ 1**E11a. Which of the following best describes your level of education? [IF STILL STUDYING: Which level best describes your level of education you obtained until now?] **(Single code)**

Some primary (not complete)	1
Primary or equivalent	2
GCSE	3
"A" Level	4
Apprenticeship / Trade Certificate / Training	5
Diploma / Certificate	6
Primary degree / Nursing Qualification (B.Sc., B.A. etc.)	7
Postgraduate (M.A., Ph.D. etc.)	8
Other (please specify)	9

**ASK IF X9 EQ 2**

- E11b. Which of the following best describes your level of education? [IF STILL STUDYING: Which level best describes your level of education you obtained until now? **(Single code)**

Some primary (not complete)	1
Primary or equivalent	2
Intermediate/ Junior/ Group Certificate or equivalent	3
Leaving certificate or equivalent	4
Apprenticeship / Trade Certificate / FAS training	5
Diploma / Certificate	6
Primary degree / Nursing Qualification (B.Sc., B.A. etc.)	7
Postgraduate (M.A., Ph.D. etc.)	8
Other (please specify)	9

- E12. What is or was the occupation of the highest income earner in your household?

INTERVIEWER RECORD OCCUPATION:

--

- E13. INTERVIEWER CODE SOCIAL CLASS OF CHIEF INCOME EARNER: **(Single code)**

A	1
B	2
C1	3
C2	4
D	5
E	6
F (50+)	7
F (LESS THAN 50)	8

- E14. How would you describe your nationality? **(Single code)**

British	1
Irish	2
Northern Irish	3
English	4
Scottish	5
Welsh	6
Polish	7
Lithuanian	8
Romanian	9
Brazilian	10
Latvian	11
Spanish	12
Other (please specify) [pop up box]	13

- E15. Which of the descriptions comes closest to how you feel about your household's income nowadays? **(Single code)**

Living very comfortably on present income	1
Living comfortably on present income	2
Coping on present income	3
Finding it difficult on present income	4
Finding it very difficult on present income	5
Don't know / prefer not to say	6

E16. How many children under the age of 18 live in your household? **(Insert number; if none, type 0)**

**ASK IF X9 EQ 2**

E17. Please say if you have each of the following ... **(Code all that apply)**

Full Medical Card or equivalent	1
GP Visit Card	2
Private medical insurance cover	3
I have none of the above	4

**ASK IF X9 EQ 1**

E18. Do you have private medical insurance? **(Single code)**

Yes	1
No	2

**Additional question – telephone script**

E19. What type of area do you live in? **(Single code)**

A city	1
A town	2
A village	3
Rural or countryside	4

E20. Would you like the contact details of someone at SMR, UCD or Queen's? **(Single code)**

Yes	1
No	2

**DISPLAY IF E20 EQ 1**

Yvonne Somers at ysomers@socialmarketresearch.co.uk – Belfast 02890 923362 or 00 44 (0)28 90 923362)
Dr Mirjam Heinen at mirjam.heinen@ucd.ie (tel: 00 353 (0)1 716 3432)
Dr Laura McGowan at laura.mcgowan@qub.ac.uk (tel: 00 44 (0)28 90 97 6401)

E21. Would you like the weblink to get further information on the study?

Yes – provide weblink	1
No – thank and close	2

**DISPLAY IF E21 EQ 1**

E22. **INTERVIEWER READ OUT WEBLINK.**

**THANK AND CLOSE**

## Appendix 5 Survey sampling frame

The Northern Ireland sample is based on achieved interviews with 327 adults aged 18 years and above. Fieldwork in Northern Ireland was conducted across all 26 Local Government Districts (Table 14). Within the Northern Ireland sample, quota controls were applied for gender, age and socioeconomic group. Table 15 presents the sample profile compared with the overall population profile of Northern Ireland.

**Table 14: Breakdown of Northern Ireland sample ( $n=327$ ) by Local Government District in a study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland**

Local Government District	Percentage of population <sup>1</sup> (%)	Percentage of sample (%)	Number in sample ( $n$ )
Antrim	2.8	3.1	10
Ards	4.6	4.3	14
Armagh	3.3	3.1	10
Ballymena	3.7	3.4	11
Ballymoney	1.6	2.8	9
Banbridge	2.5	2.8	9
Belfast	15.8	14.7	48
Carrickfergus	2.3	2.1	7
Castlereagh	4.1	3.7	12
Coleraine	3.3	4.6	15
Cookstown	1.9	2.4	8
Craigavon	4.8	4.0	13
Derry	6.0	6.7	22
Down	3.8	3.7	12
Dungannon	2.9	2.8	9
Fermanagh	3.5	3.4	11
Larne	1.9	2.4	8
Limavady	1.8	2.1	7
Lisburn	6.3	6.1	20
Magherafelt	2.4	2.1	7
Moyle	0.9	1.8	6
Newry & Mourne	5.1	4.3	14
Newtownabbey	4.9	4.6	15
North Down	4.7	4.3	14
Omagh	2.8	2.4	8
Strabane	2.3	2.4	8
TOTAL	100	100	327

<sup>1</sup> Based on 2011 Northern Ireland Census of Population Estimates (people aged 18 years and above) (Northern Ireland Statistics and Research Agency, 2011).

**Table 15: Sample profiles compared with Northern Ireland population profile aged 18 years and above ( $n = 327$ ) in a study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland**

Demographic characteristic and category		Percentage of sample population (%)	Percentage of census population (%)
Gender <sup>1,2</sup>	Male	48	48
	Female	52	52
Age <sup>3</sup>	18–39 years	43	37
	40–64 years	41	42
	65 years and above	16	21
Socioeconomic group <sup>4</sup>	ABC1	52	47
	C2DE	48	53

*(Source: Northern Ireland Census of Population 2011, Northern Ireland Statistics and Research Agency, 2011.)*

<sup>1</sup> Compared with Northern Ireland Population Mid-Year Estimates (2019).

<sup>2</sup> One respondent (0.3%) classified their gender as non-binary.

<sup>3</sup> Compared with Northern Ireland Population Mid-Year Estimates (2019).

<sup>4</sup> Compared with 2011 Northern Ireland Population Census Estimates for all adults in Northern Ireland.

The sample in Ireland was based on achieved interviews with 722 adults aged 18 years and above. Fieldwork in Ireland was conducted across all 34 Local Authority Areas (Table 16). Within Ireland sample, quota controls were applied for the gender, age and socioeconomic group. Table 17 presents the sample profile compared with the overall population profile in Ireland.

**Table 16: Breakdown of sample in Ireland ( $n = 722$ ) by Local Authority Area in a study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland**

Local Authority Area	Percentage of population <sup>1</sup> (%)	Percentage of sample population (%)	Number in sample ( $n$ )
Dublin City Council	11.9	11.8	85
Dún Laoghaire–Rathdown County Council	4.6	4.4	32
Fingal County Council	5.7	5.4	39
South Dublin County Council	5.8	5.5	40
Carlow County Council	1.2	1.7	12
Kildare County Council	4.4	4.2	30
Kilkenny County Council	2.1	1.9	14
Laois County Council	1.6	1.5	11
Longford County Council	0.8	1.7	12
Louth County Council	2.6	2.6	19

Local Authority Area	Percentage of population <sup>1</sup> (%)	Percentage of sample population (%)	Number in sample ( <i>n</i> )
Meath County Council	3.8	4.0	29
Offaly County Council	1.7	1.5	11
Westmeath County Council	1.9	1.9	14
Wexford County Council	3.1	2.8	20
Wicklow County Council	3.0	3.0	22
Clare County Council	2.6	2.5	18
Cork City Council	2.8	2.9	21
Cork County Council	8.5	8.0	58
Kerry County Council	3.3	3.5	25
Limerick City Council	1.2	1.4	10
Limerick County Council	3.1	2.9	21
North Tipperary County Council	1.6	1.8	13
South Tipperary County Council	2.0	1.8	13
Waterford City Council	1.1	1.4	10
Waterford County Council	1.5	1.5	11
Galway City Council	1.7	1.7	12
Galway County Council	3.8	3.9	28
Leitrim County Council	0.7	1.4	10
Mayo County Council	2.9	2.8	20
Roscommon County Council	1.4	1.5	11
Sligo County Council	1.4	1.2	9
Cavan County Council	1.5	1.5	11
Donegal County Council	3.5	3.0	22
Monaghan County Council	1.3	1.2	9
TOTAL	100	100	722

<sup>1</sup> Based on 2011 Irish Census of Population Estimates (people aged 18 years and above) (Central Statistics Office Ireland, 2011).

**Table 17: Sample profiles compared with Republic of Ireland population profile aged 18 years and above ( $n = 722$ ) in a study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland**

Demographic characteristic and category		Percentage of sample population (%)	Percentage of census population (%)
Gender <sup>1,2</sup>	Male	47	50
	Female	53	50
Age <sup>3</sup>	18–39 years	39	40
	40–64 years	42	42
	65 years and above	19	18
Socioeconomic group <sup>4</sup>	ABC1	53	41
	C2DE	42	52
	F	5	7

*(Source: Republic of Ireland Census of Population 2011, Central Statistics Office Ireland, 2011.)*

<sup>1</sup> Compared with 2011 Ireland Population Census Estimates (people aged 18 years and above).

<sup>2</sup> Two respondents (0.6%) classified their gender as non-binary.

<sup>3</sup> Compared with 2011 Ireland Population Census Estimates (people aged 18 years and above).

<sup>4</sup> Compared with 2011 Ireland Population Census Estimates for all adults in Ireland.

# Appendix 6 Focus group screening questionnaire



## Example Screening Questionnaire for Focus Groups

### Obesity Market Research Project

16 December 2020



3 Wellington Park  
Belfast  
BT9 6DJ

T: 02890 923362

F: 02890 923334

[info@socialmarketresearch.co.uk](mailto:info@socialmarketresearch.co.uk)

[www.socialmarketresearch.co.uk](http://www.socialmarketresearch.co.uk)





## Recruitment Questionnaire

Job Name	XXXXXXX
Job Number	000001
Date	
Time	
Recruiter ID Number	

### Strictly Private and Confidential

This recruitment questionnaire is the property of Social Market Research, 3 Wellington Park, Belfast BT9 6DJ. All sections must be completed. Good Morning / Afternoon / Evening,

My name is \_\_\_\_\_ from Social and Market Research.

We are a local independent research company and have been commissioned by University College Dublin and Queen's University Belfast on behalf of **safefood** to recruit a number of local people to take part in a small focus group online to explore their views relating to public's attitudes towards obesity and thoughts on support for a variety of initiatives to address obesity.

All it would involve would be for you to join one of our researchers for an informal discussion on a ZOOM call which would take up to 90 minutes (1.5hrs). All participants receive a voucher for Amazon for £30/€35 as a thank you for giving up your time. These will be emailed to you straight after you take part in the focus group. If you think you might be interested, we have a few brief questions to ask you now to ensure we get a varied group of people, and following that, we will email you a copy of the Participant Information Sheet which you can read in full before deciding to take part and completing the consent form.

Would you or someone in your household be interested in taking part?

**(Yes – Continue, No – Thank and CLOSE)**

### Demographic information

Can I just check some information with you, this is to ensure we get a varied group of people?

Q1. What is your country of residence?

Northern Ireland	1
Republic of Ireland	2
Prefer not to say	3

Q2. What is your gender?

Male	1
Female	2
Non-binary	3
Prefer not to say	4

Q3. What was your age on your last birthday?

Prefer not to say	1

Q4. What is the highest level of education you have attained?

Some primary (not complete)	1
Primary or equivalent	2
Intermediate / Junior / Group Certificate or equivalent – GCSE	3
Leaving certificate or equivalent – “A” Level	4
Apprenticeship / Trade Certificate / Training (FAS, other)	5
Diploma / Certificate	6
Primary degree / Nursing Qualification (B.Sc., B.A. etc.)	7
Postgraduate (M.A., Ph.D. etc.)	8

Other (please specify)	9
Prefer not to say	10

Q5. What is or was the occupation of the highest income earner in your household?

Prefer not to say	1

Q6. Do you have any children (whether they live at home or not)?

Yes	1
No	2
Prefer not to say	3

Q7. Does the person fit the necessary characteristics in terms of gender, age and socioeconomic group (SEG) and children? [based on target recruitment profile for the group]

Yes	1	<b>Go to Q2</b>
No	2	<b>Ask if anyone else in household would be interested in attending the focus group</b>

**(Yes – Continue, No – thank and close)**

Q8. Due to COVID-19 restrictions, this focus group will be facilitated using Zoom, which is an online meeting tool, so can I check if you have access to a desktop computer, laptop, tablet or smart phone?

Yes	1	<b>Go to Q3</b>
No	2	<b>Thank and close</b>

Q9. To participate in a Zoom meeting, you need to have an email address so we can email you the link so you can access the meeting. Can I check if you have an email address that you currently use on a regular basis?

Yes	1	<b>Go to Q4</b>
No	2	<b>Thank and close</b>

Q10. Have you ever used Zoom before?

Yes	1	Go to Q6
No	2	Go to Q5

Q11. Are you willing to download the Zoom app to your desktop, laptop, tablet or smart phone?

Yes	1	Go to Q6
No	2	Thank and close as cannot participate in a Zoom meeting if unwilling to download the Zoom App

Q12. We would like you to participate in a 5-minute test session before the event to ensure you are comfortable with the Zoom meeting experience before the scheduled event. A member of our team will ring you a day or two before the event at time that suits you to do a test run. They will email you a link to ensure you can access the meeting. Are you prepared to participate in this test session and to be contacted by my colleague?

Yes	1	Go to Q7
No	2	Thank and close

### Consent

Q1. Can I just confirm you are happy for us to pass on the information gathered in this recruitment questionnaire including your personal details to the University as they will be issuing the invites and moderating the focus group?

Yes	1	Go to Q8
No	2	Thank and close

Q2. Do you consent to have your input recorded during the focus group? Please note that this recording will only used for the purposes of writing a research report. None of your responses will be attributed to you personally and you cannot be identified.

Yes	1	Go to Q9
No	2	Thank and close

Q3. Finally, can I confirm you understand fully what is involved in participating in this one-off (90 minute) online focus group to be held via Zoom in the next few weeks?

Yes	1	Assign a participant ID below
No	2	Thank and close

If agreed, thanks for agreeing to help us with this and record details.

Now that we have all the information we need, can I confirm with you that you're happy to receive an email with the study information sheet and a link to the online consent form? The consent form is very short but needs to be completed before the group takes place. When you complete the consent form, a member of the research team will email you a link with the invite to the focus groups.

Yes	1	Assign a participant ID below
No	2	Thank and close

**IF ELIGIBLE ASSIGN Participant ID Code: \_\_\_\_\_**

# Appendix 7 Recruitment procedure for qualitative focus groups

Figure 5. Participant selection process including screening, obtaining consent and invitation to online focus groups in a study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland.

## Pilot focus groups

## Main focus groups

*Screening stage*

**1. QUB research team advertise call for study participants**  
through University email list and University social media

Administer screening questionnaire to interested individuals who get in touch

If eligible, assign Participant ID and inform regarding next email

**1. SMR recruit by phone individuals who fit the focus group profile**

Administer Screening questionnaire.

If eligible, assign Participant ID and send individual's data to research team in QUB



**2. QUB research team sends participant email with:**

- Participant Information Sheet
- Link to online Consent Form

*Obtaining consent*



**3. After 24 hours:**

- If Consent Form completed, send link to online focus group
- If Consent Form not completed, confirm interest for participation, remind about consent form and send link to focus group meeting



*Testing Zoom*

**4. One day before the focus group**

Phone participant, confirm they received link to online FG and have downloaded the Zoom app and completed a test session.

# Appendix 8 Focus group topic guide

## *1. Welcome and introductions*

## *2. Explanations of what is meant by “obesity” and a brief overview of the purpose of the quantitative survey*

Overweight and obesity are characterised by the accumulation of excess body fat that can have a negative impact on our physical and mental health, as well as our overall quality of life.

In Northern Ireland and Republic of Ireland a number of different approaches have been put into place with the aim of reducing the number of people living with obesity and improve their health. Our survey aimed to collect information on people’s views on these different approaches and on other issues around obesity. The findings of this survey will help researchers to understand how to develop an effective action plan to reduce the level of obesity on the island of Ireland.

*[Share screen with examples of statements in the survey]*

## *3. Discuss each section and probe participants’ thoughts on the quantitative survey findings. This includes topics such as:*

*a) Public attitudes on the scale of the challenge of obesity*

*b) Attitudes towards obesity as a disease / the medicalisation of obesity*

*c) Levels of public support for different approaches to addressing obesity (e.g. policies and initiatives)*

Our survey showed that:

“85% of survey respondents believe that a person with a healthy bodyweight can lead a more active life”.

“63% of respondents agree with this statement: People with obesity would have a better social life if they lost weight.”

“According to 80% of respondents, obesity represents a very serious health condition for our society.”

“87% of respondents agree with this statement: Losing weight would greatly improve the health of people living with obesity.”

“77% of survey respondents believe that people with obesity need more medical care.”

“According to 56% of respondents, people who have obesity live shorter lives.”

Can I ask what people think about that?

Some of the proposed actions and initiatives focus on children; for example, 92% of survey respondents believe that the Government should ensure that school meals meet a healthy standard of nutrition. Some other supported strategies target only adults, such as a government regulation to ensure healthy meals at workplaces, which is supported by 89% of our respondents.



What are your thoughts on these two types of actions? Do you think actions should focus more on children or adults?

- *Present the most supported policies and ask:*

The majority of respondents support the implementation of the following initiatives. What do people think about these approaches? Are they generally in support with these or would they make any other suggestions and why?

- *Present the least supported policies and gauge participants' views.*

The following policies received the lowest amount of support. What do people think of them?

- *How do we avoid inequalities in who is targeted / reached by such policies?*

Sometimes the approaches that are put in place to help people address obesity (like different policies or programmes) might actually put some groups of people at a disadvantage, for example, men /women, those from ethnic minority groups, or different age groups or those on different incomes.

Do you think that there is a certain group of people that might benefit by these approaches?  
[Share screen with most supported policies]

- *Ask if participants have personal experiences with any programmes or approaches to address obesity and explore how they feel about them*

What are your views on the services or programmes available to help people manage their weight (in your area/in Ireland/NI)?

What kind of characteristics do you think that people need to have to get involved in obesity services such as community weight management programmes, Slimming World or Weight Watchers?

What about the impact of COVID-19? How has it changed the way that obesity services / programmes are put into action, that you know of?

- Now we would like to show you how the findings of our survey completed in 2020 compares with a survey that was done on a similar topic in the Republic of Ireland in 2013. We will show you a few diagrams on the screen to help with this and we would like to hear your thoughts on how or why findings might differ.

Here we can see there is currently a higher proportion of survey respondents who support policies that encourage a healthy nutrition standard in meals at workplaces compared to 2013. Specifically, this proportion increased from 62 to 89%. Why do you think that is?

#### *4. Discussion around stigma, weight bias and weight-based discrimination*

This part of the focus group discussion will focus on views about stigma, weight bias and weight-based discrimination.

*Explain definition of weight bias, discrimination and obesity stigma using slide*

We asked survey respondents about views in society around people with obesity. Questions related to both their own experience (no matter what their weight was) and their views on how the public view people with obesity.

##### *4.1. Personal experiences*

- 10% of people in our survey felt that they had been personally discriminated against because of their weight on at least one occasion. This experience could have been in any setting or circumstance in society e.g. job interview, doctor's visit or on the bus etc. What do you think about that?
- *Building on that further:* [20%] and [52%] of people surveyed (respectively) said that they had in the past year
- 20% – difficulty in obtaining healthcare because of their weight, shape or size
- 52% – been discriminated against in public settings / on public transport because of their weight, shape or size
- Why do you think that might be?
- Are there any other examples of weight-based discrimination you can think of? It could be something that's happened to you personally, if you are comfortable to share that with the group?
- Is it important to reduce weight stigma and discrimination surrounding a higher body weight in society? What do people think?
- We asked people about how comfortable they were about talking to various people about their weight, shape or size. 14% of those living with overweight or obesity reported that they would not be comfortable talking to their GP about the topic. On the other hand, 6% of people with normal weight reported they would not be comfortable talking about the topic. How do you feel about that number? Does it surprise you?

#### 4.2. General views

- Respondents were asked if people with obesity should have the same right as everyone else to receive treatment in the health system; 82% in the whole sample agreed that they should. What are your thoughts on that?
- What do you think about the following statement? “Most people with obesity are self-conscious about their weight”. 66% of survey respondents agreed. *[Explore nuances of opinion]*
- How do you feel the media portray people in larger body sizes, or those with obesity?
- Media often show people of a higher body weight or larger size engaging in unhealthy behaviours such as eating unhealthy foods or disliking exercise. In our survey, when asked, 57% of people thought that the media promotes negative stereotypes about people with obesity. What do you think?
- How about advertisements that purposely include people with obesity, how do you feel about those? If you have watched any such advertisements, portraying people with larger bodies in a more positive light, did you think differently about obesity after viewing them?

#### 5. COVID-related questions

- The COVID-19 pandemic has highlighted that those with very high body weights are at greater risk of serious symptoms of COVID-19 infection. There has been lots of media attention on this topic, so firstly we wondered if anyone could tell us what they have seen relating to this in the news or heard from family and friends.
- How do people think that the restrictions in place to manage the spread of the COVID-19 virus have impacted the numbers of people at risk of obesity, or those already living with obesity?

6. We are almost at the end and as one final task we would like you to look at a series of different approaches we haven't touched on so far. Could you identify the top 3 approaches to manage obesity and explain your reasoning / rationale for your decisions?

*[Show final slide]*

**Thank – close – mention vouchers**

## Slides used alongside the focus groups topic guide

### Slide 1

Survey respondents answered the following:

Please say how much you agree with these statements (Strongly disagree – Strongly agree):

- A person with a healthy bodyweight can lead a more active life.
- People with obesity would have a better social life if they lost weight.
- Obesity represents a very serious health condition for our society.
- Losing weight would greatly improve the health of people living with obesity.
- People with obesity need more medical care.
- People who have obesity live shorter lives.

### Slide 2

Public attitudes on the scale of the challenge of obesity

- 85% of survey respondents believe that **a person with a healthy bodyweight can lead a more active life.**
- 63% of respondents agree with this statement: **People with obesity would have a better social life if they lost weight.**
- According to **80%** of respondents, **obesity represents a very serious health condition for our society.**

### Slide 3

Attitudes towards obesity as a disease

- 87% of respondents agree with this statement: **Losing weight would greatly improve the health of people living with obesity.**
- 77% of survey respondents believe that **people with obesity need more medical care.**
- According to **56%** of respondents, **people who have obesity live shorter lives.**

Slide 4

Levels of public support for obesity policies and initiatives

The majority support the implementation of the following initiatives:

1. The government should make sure that school meals meet a healthy standard of nutrition.
2. Practical education in food preparation should be taught in all schools.
3. Education to promote healthy eating should be provided in all schools.
4. The government should make sure that meals available in hospitals meet a healthy standard of nutrition.
5. The government should provide resources to improve exercise and playground facilities.

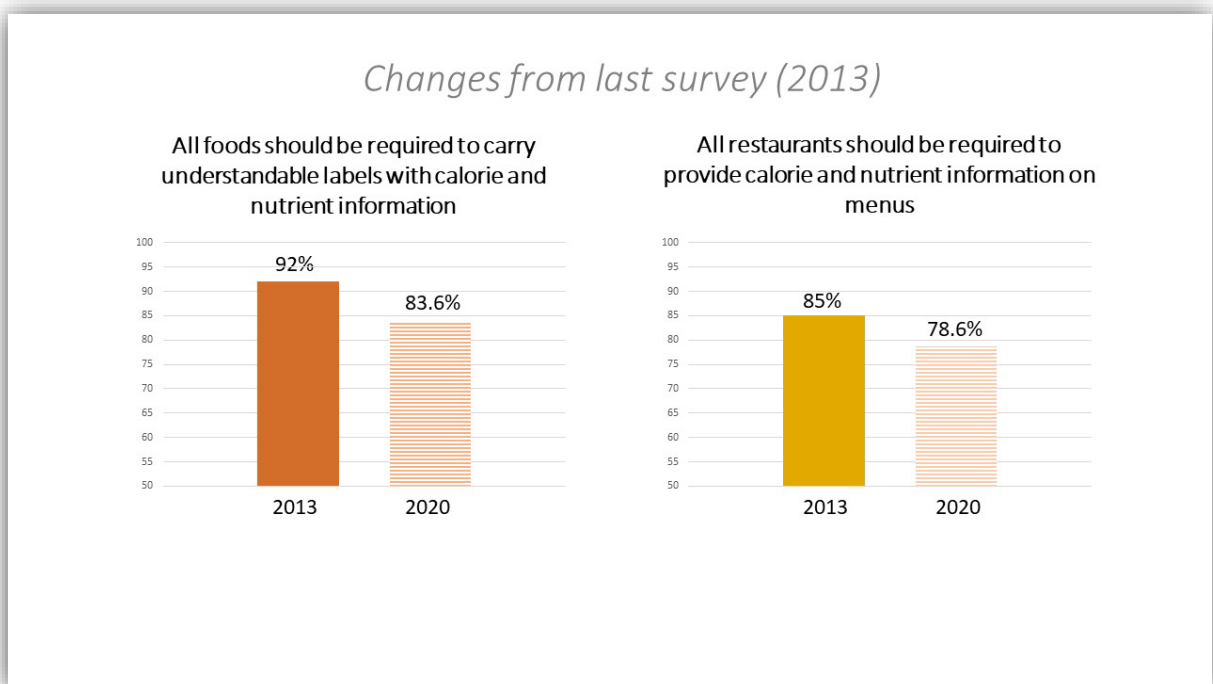
Slide 5

Levels of public support for obesity policies and initiatives

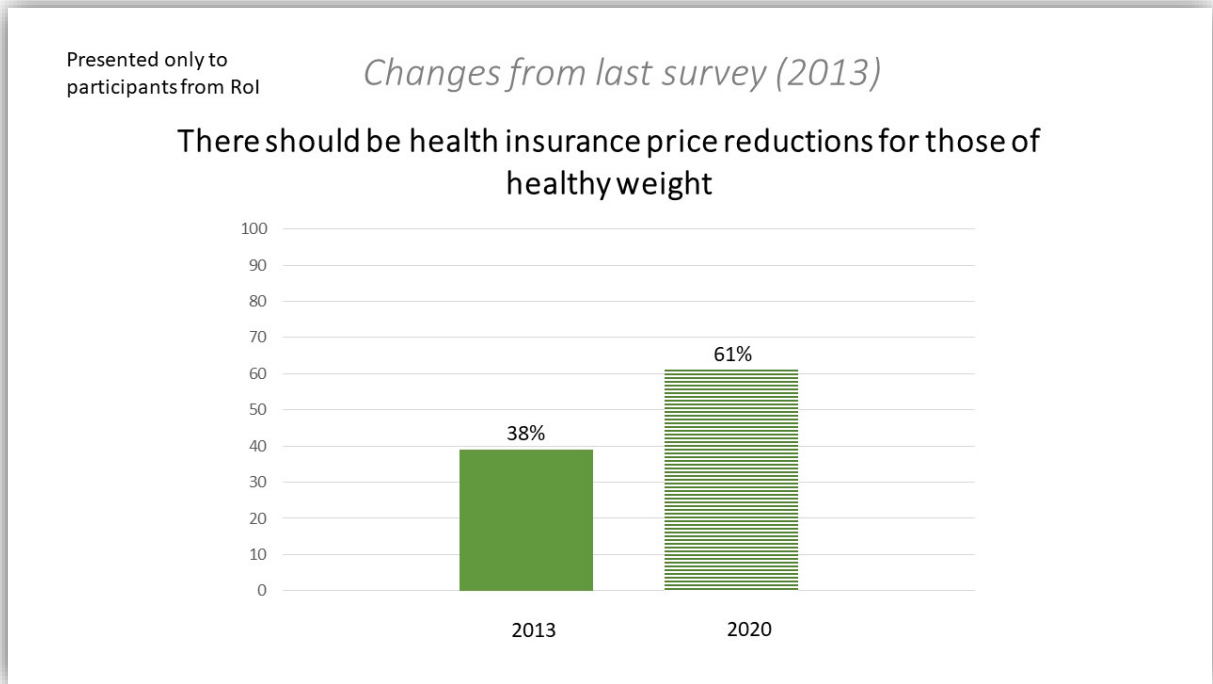
The following policies received the lowest amount of support :

1. **There should be an additional health charge for those presenting with obesity**
2. **Portion sizes in restaurants and fast-food shops should be restricted**

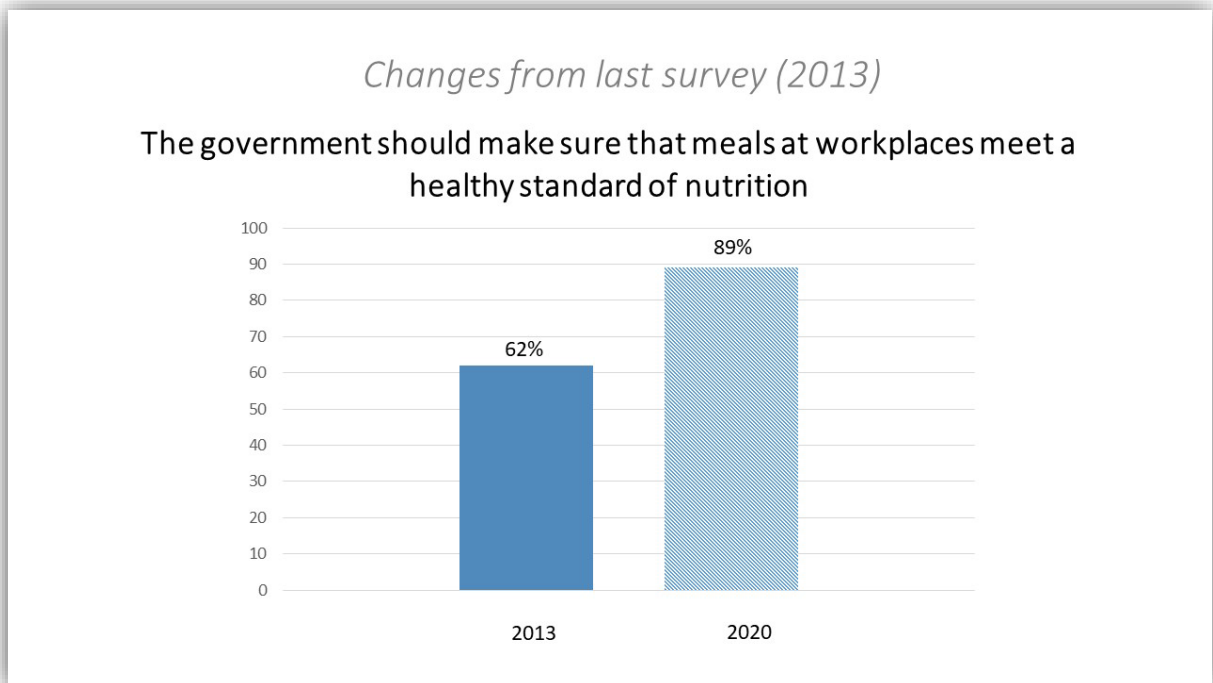
Slide 6



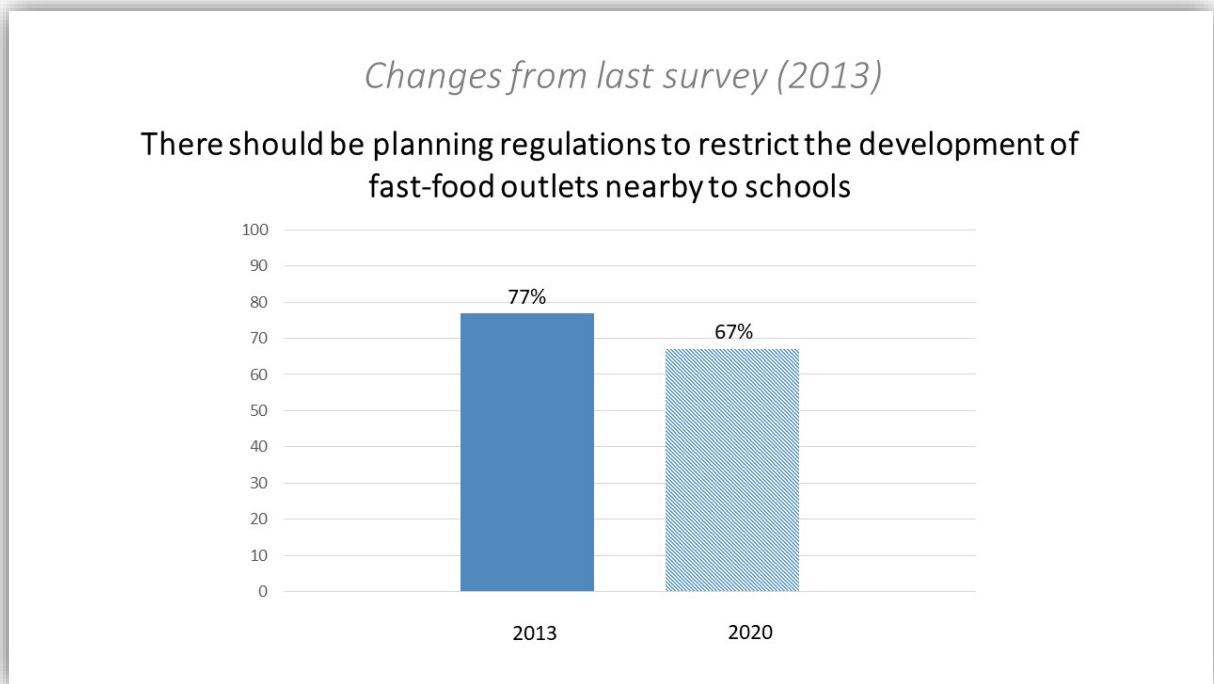
Slide 7



Slide 8



Slide 9



Slide 10

Definitions

- **Weight bias** refers to negative attitudes and views about obesity and about people with obesity
- **Weight stigma** refers to social stereotypes and misconceptions about obesity- can include beliefs that people with obesity are lazy, awkward, sloppy, non-compliant, unintelligent, unsuccessful and lacking self-discipline or self-control.
- Weight bias and stigma can lead to **weight discrimination** (i.e. when we enact our personal biases and the social stereotypes about obesity and treat people with obesity unfairly).

Slide 11

Please rank the following policies based on their importance:

Policy / Strategy	Votes
1. The government should provide resources to <b>encourage women to breastfeed</b>	
2. The government should <b>ban advertising for unhealthy food aimed at children.</b>	
3. The government should <b>reward companies for healthy food innovations.</b>	
4. The government should provide <b>vouchers to low-income families to buy healthy foods at reduced prices.</b>	



# Appendix 9 Public acceptability of policies to address obesity

Table 18: Views of policy interventions, by the public, reported separately for Northern Ireland (NI) and Ireland, in a study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland

Statement	Strongly agree NI	Strongly agree Ireland	Agree NI	Agree Ireland	Neither agree nor disagree NI	Neither agree nor disagree Ireland	Disagree NI	Disagree Ireland	Strongly disagree NI	Strongly disagree Ireland	Don't know NI	Don't know Ireland
The Government should impose taxes on unhealthy foods and use the proceeds to promote healthier eating.	19.5%	21.2%	48.5%	46.2%	10.7%	13.5%	12.1%	9.0%	3.1%	2.6%	6.2%	7.5%
The Government should subsidise (make cheaper) fruit and vegetables to promote healthier eating.	36.6%	35.5%	49.5%	46.7%	6.9%	9.3%	2.8%	4.0%	0.0%	1.6%	4.2%	2.9%
The Government should provide vouchers to low-income families to buy healthy foods at reduced prices.	27.3%	29.3%	48.9%	46.5%	12.1%	9.6%	5.3%	6.7%	1.6%	2.1%	4.9%	5.9%
Vending machines selling unhealthy food should be banned from our schools (including secondary schools).	34.3%	32.3%	45.7%	44.6%	10.7%	8.8%	5.8%	7.2%	0.0%	2.2%	3.4%	4.8%
The Government should make sure that primary school meals meet a	46.8%	51.2%	48.8%	38.8%	1.5%	4.1%	0.0%	2.5%	0.0%	0.8%	2.9%	2.6%

healthy standard of nutrition.												
The Government should make sure that secondary school meals meet a healthy standard of nutrition.	46.3%	50.6%	47.1%	38.7%	1.3%	4.4%	0.0%	1.5%	0.0%	1.1%	5.4%	3.7%
The Government should make sure that meals provided at workplaces meet a healthy standard of nutrition.	42.4%	48.0%	49.0%	39.6%	4.0%	5.3%	1.9%	3.8%	0.0%	0.4%	2.8%	2.9%
The Government should make sure that meals available in hospitals to staff and visitors meet a healthy standard of nutrition.	44.8%	52.9%	47.4%	37.5%	2.8%	4.6%	0.0%	1.3%	0.3%	0.3%	4.6%	3.4%
The Government should work with the food companies to improve the nutritional content of processed foods (e.g. less salt or fats).	43.3%	48.7%	47.7%	39.0%	2.6%	6.2%	0.3%	1.4%	0.0%	0.5%	6.1%	4.2%
The Government should impose limits on certain	23.7%	16.6%	58.6%	60.8%	13.3%	11.8%	1.3%	5.4%	0.7%	2.5%	2.4%	2.9%

ingredients (e.g. salt or fats) on food companies to improve the nutritional content of processed foods.												
TV stations should give free air-time to governmental campaigns that promote healthier eating.	13.7%	22.0%	58.5 %	47.1%	18.6%	18.9%	4.9%	6.8%	0.3%	1.9%	4.0%	3.3%
There should be public measures like free home delivery to support easier access to healthy foods for the elderly and those with lower incomes.	17.6%	20.9%	62.3 %	55.7%	12.2%	13.8%	1.8%	5.8%	1.5%	1.5%	4.6%	2.3%
VAT (Value Added Tax) rates should be lower for healthy foods and higher for unhealthy foods.	21.0%	28.3%	61.0 %	51.2%	11.9%	12.8%	2.9%	3.8%	0.9%	1.8%	2.2%	2.1%
The Government should ban advertising for unhealthy food that is aimed at children.	32.4%	30.5%	51.8%	47.9%	10.7%	10.8%	1.8%	6.9%	0.0%	1.2%	3.3%	2.7%

The Government should ban advertising for unhealthy food that is aimed at adults.	24.2%	24.2%	54.6%	41.1%	15.0%	20.0%	5.6%	10.8%	0.3%	2.2%	0.3%	1.8%
The Government should spend money on effective campaigns informing people about the risks of unhealthy eating.	21.9%	36.0%	62.9%	47.1%	10.2%	9.2%	2.1%	3.6%	0.0%	1.3%	2.9%	2.8%
Education to promote healthy eating should be provided in all schools.	36.2%	47.1%	58.4%	42.9%	3.2%	5.1%	0.0%	2.2%	0.0%	0.6%	2.2%	2.1%
Practical education in food preparation should be taught in all schools.	34.9%	49.8%	60.2%	40.4%	1.6%	4.1%	0.0%	1.8%	0.0%	0.7%	3.4%	3.2%
The Government should subsidise businesses which provide programmes to support their employees in healthy eating.	21.3%	28.5%	59.1%	42.1%	11.4%	14.7%	3.8%	8.8%	1.2%	2.5%	3.1%	3.2%
All foods should be required to carry understandable labels	28.1%	31.5%	59.1%	49.7%	7.8%	12.6%	0.9%	1.6%	0.0%	0.9%	4.0%	3.7%

with calorie and nutrient information.												
All restaurants should be required to provide calorie and nutrient information on menus.	26.9%	29.3%	57.6%	46.0%	10.4%	14.7%	3.8%	5.7%	0.3%	1.9%	0.9%	2.6%
The food industry should help pay for governmental campaigns that promote healthy eating.	21.8%	26.8%	51.6%	45.9%	12.9%	18.0%	8.8%	3.8%	0.6%	1.9%	4.3%	3.5%
The Government should reward companies for healthy food innovations.	15.5%	25.6%	57.3%	50.5%	17.3%	14.5%	6.3%	7.4%	1.9%	0.4%	1.8%	1.7%
Children should have to participate in a minimum of 30 minutes exercise a day while at school.	48.3%	52.6%	40.8%	31.1%	4.9%	10.2%	3.8%	3.9%	0.0%	0.4%	2.2%	1.7%
There should be planning regulations to restrict the development of fast-food outlets in areas nearby to schools.	25.1%	19.9%	56.0%	40.2%	13.0%	19.9%	4.3%	16.5%	0.0%	1.1%	1.6%	2.4%
The Government should provide resources to	37.9%	47.3%	56.8%	40.8%	2.1%	7.5%	0.3%	2.3%	0.0%	0.3%	2.8%	1.8%

improve exercise and playground facilities.												
The Government should provide resources to encourage women to breastfeed.	28.6%	23.9%	56.9%	43.1%	10.9%	26.2%	2.2%	3.2%	0.3%	1.7%	1.0%	1.9%
There should be planning regulations to restrict the development of certain food outlets (selling foods high in saturated fats) in towns and cities.	26.2%	16.4%	50.8%	36.7%	13.8%	20.4%	7.0%	20.5%	0.3%	2.2%	1.9%	3.7%
There should be a ban on sales promotion and special offers on unhealthy foods.	26.1%	16.2%	45.0%	40.9%	11.0%	16.1%	11.2%	20.6%	3.1%	3.6%	3.7%	2.6%
Portion sizes in restaurants and fast-food shops should be restricted.	23.2%	9.1%	36.6%	32.8%	15.2%	19.1%	16.3%	27.5%	5.6%	9.7%	3.0%	1.8%
There should be a tax incentive to encourage sports participation, with a tax break for the	26.9%	32.8%	46.9%	41.9%	16.4%	15.7%	6.5%	4.7%	0.9%	1.9%	2.3%	3.0%

purchase of relevant sports equipment.												
The Government should extend the sugar sweetened drinks tax to include all sugary foods to promote healthier eating.	20.2%	15.6%	49.4 %	52.1%	19.3%	13.2%	6.5%	10.8%	2.2%	3.7%	2.5%	4.6%
The Government should ban companies that make unhealthy foods and drinks from sponsoring children's organisations, children's events and children's sporting teams.	27.7%	15.4%	46.1 %	46.5%	13.8%	19.7%	7.1%	13.1%	1.3%	2.2%	4.0%	3.1%
The Government should restrict advertising for unhealthy food in public spaces (e.g. bus stops, trains stations, hospitals, roadside).	23.5%	21.7%	52.4 %	44.1%	14.2%	13.9%	6.4%	15.5%	1.9%	2.2%	1.6%	2.7%
The Government should restrict advertising for unhealthy food that is aimed at children on the Internet (e.g. games, apps, social media).	30.5%	30.8%	53.5 %	48.5%	8.9%	7.9%	3.3%	7.5%	1.3%	1.8%	2.5%	3.5%



Children's height and weight should be routinely measured to monitor rates of growth in the population.	24.1%	27.1%	38.7 %	36.5%	18.0%	20.0%	13.2%	10.1%	3.4%	3.8%	2.5%	2.6%
The Government should try and make towns and cities so that people are encouraged to be more active and healthier (such as bike lanes, parks, pedestrian areas).	46.3%	37.1%	44.2 %	39.8%	7.0%	15.5%	0.0%	2.0%	0.7%	1.7%	1.8%	3.9

## Appendix 10 Views about obesity

Table 19: Views about obesity, by the public, reported separately for Northern Ireland (NI) and Ireland, in a study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland

Statement	Strongly agree NI	Strongly agree Ireland	Agree NI	Agree Ireland	Neither agree or disagreed NI	Neither agree or disagree Ireland	Disagree NI	Disagree Ireland	Strongly disagree NI	Strongly disagree Ireland	Don't know NI	Don't Know Ireland
Being overweight is something you inherit from your parents.	8.8%	9.3%	22.6%	25.2%	20.3%	14.0%	30.5%	26.9%	11.4%	13.7%	6.3%	11.0%
There is too much unhealthy and fatty food in restaurants, supermarkets and convenience stores (shops).	33.1%	29.3%	52.3%	48.6%	11.9%	13.6%	1.8%	6.3%	0.3%	0.8%	0.6%	1.4%
Most weight-loss diets are not very effective.	12.5%	14.2%	40.3%	28.7%	24.5%	15.6%	13.1%	29.0%	2.2%	3.8%	7.5%	8.7%
People lack the willpower to diet or exercise regularly.	24.5%	24.7%	53.1%	56.1%	15.9%	9.2%	3.7%	5.4%	1.6%	2.1%	1.2%	2.4%
People become overweight because they spend too much time driving / watching television / on the Internet.	27.3%	27.5%	48.1%	53.4%	14.3%	8.4%	8.2%	7.5%	0.9%	2.3%	1.2%	0.8%
People become overweight because they don't have	15.8%	9.9%	48.3%	45.1%	14.0%	13.6%	15.6%	23.5%	5.4%	5.4%	0.9%	2.4%

time to prepare healthy meals.												
People become overweight because they are simply born that way.	9.7%	7.7%	21.6%	26.9%	24.3%	15.7%	25.9%	29.6%	11.8%	9.4%	6.7%	10.6%
Most people who become overweight don't view their weight as a problem.	9.6%	6.8%	32.3%	41.5%	25.6%	17.4%	23.8%	21.6%	3.1%	4.1%	5.5%	8.6%
People become overweight because they are unable to buy healthy food close to their home.	9.1%	4.4%	35.4%	29.7%	20.5%	13.0%	21.9%	38.6%	9.9%	11.0%	3.2%	3.3%
People become overweight because there are too many snack foods readily available in workplaces, shops and homes.	26.4%	27.5%	50.4%	54.5%	15.4%	8.6%	6.9%	6.5%	0.0%	1.9%	0.9%	1.0%
People become overweight because healthy foods are too expensive.	16.3%	8.8%	39.8%	33.1%	19.6%	16.8%	18.3%	29.6%	4.2%	10.5%	1.8%	1.1%
People who become overweight eat whatever they want.	25.2%	33.6%	45.0%	44.6%	18.3%	10.8%	7.4%	5.6%	0.3%	1.4%	3.8%	4.0%
People become overweight because they don't have time to exercise.	16.0%	8.2%	37.4%	46.3%	18.6%	18.0%	23.0%	19.7%	3.4%	4.4%	1.6%	3.4%

People who eat too much unhealthy food do so because it costs much less than healthy food.	15.1%	9.0%	42.1%	38.9%	18.9%	16.7%	16.0%	25.8%	5.5%	7.2%	2.5%	2.4%
Most people in society can't afford to eat healthy foods and exercise regularly.	16.7%	6.7%	29.9%	35.9%	22.8%	16.7%	22.8%	30.5%	5.0%	7.6%	2.8%	2.5%
People become overweight because they lack information about healthy eating or health risks of excess weight.	14.1%	26.2%	31.3%	48.6%	22.1%	9.5%	21.4%	10.3%	7.2%	3.5%	3.8%	2.0%
People become overweight because they value more immediate satisfaction compared to future health risks.	36.2%	27.3%	31.9%	45.2%	23.1%	12.5%	4.7%	6.2%	0.3%	0.9%	3.8%	7.8%
People have to deny themselves a great deal to avoid obesity.	18.1%	16.2%	33.2%	37.3%	20.3%	17.5%	23.6%	23.1%	4.1%	2.7%	0.7%	3.3%
Maintaining a healthy bodyweight is expensive.	11.6%	10.6%	40.0%	31.9%	19.5%	17.6%	23.8%	31.0%	2.9%	6.4%	2.2%	2.5%
People should maintain a healthy weight for optimal health.	30.0%	39.8%	55.8%	49.1%	12.4%	4.8%	1.3%	2.6%	0.3%	2.1%	0.3%	1.6%

Maintaining a healthy bodyweight is boring.	8.5%	4.2%	27.7%	23.8%	30.5%	24.7%	27.3%	35.9%	3.9%	6.7%	2.1%	4.7%
People with obesity would be treated better if they lost weight.	16.6%	20.9%	39.6%	46.9%	29.8%	18.8%	7.4%	7.0%	0.7%	2.2%	5.9%	4.2%
Maintaining a healthy bodyweight takes a lot of effort.	21.2%	19.4%	46.8%	50.8%	21.0%	13.3%	8.9%	11.9%	0.6%	2.4%	1.5%	2.1%
A person with a healthy bodyweight can lead a more active life.	30.2%	34.1%	51.2%	52.2%	13.9%	8.5%	2.2%	1.9%	0.7%	1.2%	1.9%	2.2%
Maintaining a healthy bodyweight makes life less fun.	10.5%	6.8%	19.0%	26.5%	25.9%	22.7%	34.3%	31.4%	8.0%	8.5%	2.2%	4.1%
People with overweight or obesity are considered less attractive.	17.2%	14.1%	32.1%	35.2%	26.6%	21.1%	17.1%	17.3%	1.3%	5.3%	5.8%	7.2%
People with obesity need more medical care.	26.3%	34.8%	47.2%	43.2%	17.8%	12.1%	2.5%	4.7%	0.0%	1.9%	6.2%	3.3%
People with obesity are embarrassed by the way they look.	18.7%	10.3%	37.5%	42.6%	30.9%	21.1%	5.6%	11.9%	0.0%	3.0%	7.3%	11.1%
Losing weight would greatly improve the health	33.7%	37.7%	52.7%	50.1%	10.2%	6.8%	1.2%	2.5%	0.0%	1.0%	2.2%	1.9%

of people living with obesity.												
People with obesity would have a better social life if they lost weight.	22.3%	22.0%	36.8%	42.7%	26.0%	20.2%	8.4%	8.4%	1.0%	2.4%	5.5%	4.2%
A person who avoids obesity has a restricted lifestyle.	15.3%	7.7%	28.1%	34.1%	24.2%	16.1%	20.8%	26.6%	7.6%	9.1%	4.0%	6.4%
People with a healthy bodyweight are taken more seriously.	22.5%	17.3%	33.6%	41.2%	28.3%	21.0%	12.8%	14.4%	1.2%	1.4%	1.6%	4.7%
Getting older causes people to become overweight.	21.0%	20.1%	43.5%	47.0%	24.2%	14.6%	6.6%	10.5%	0.7%	2.4%	4.0%	5.3%
People can be overweight and still be healthy.	13.6%	8.4%	43.3%	41.6%	31.0%	23.0%	8.7%	20.0%	0.6%	1.4%	2.7%	5.6%
People who have obesity live shorter lives.	20.2%	13.3%	38.2%	40.7%	29.7%	23.5%	4.0%	7.3%	0.3%	1.4%	7.7%	13.8%
Obesity represents a very serious health condition for our society.	32.1%	12.5%	52.9%	63.6%	11.6%	21.1%	0.9%	2.2%	2.5%	0.6%	N/A	N/A

## Appendix 11 Public perceptions around people with obesity in society

Table 20: General views of the public around weight and people with obesity, reported separately for Northern Ireland (NI) and Ireland, in a study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland

Statement	Strongly agree NI	Strongly agree Ireland	Agree NI	Agree Ireland	Neither agree nor disagree NI	Neither agree nor disagree Ireland	Disagree NI	Disagree Ireland	Strongly disagree NI	Strongly disagree Ireland	Don't know NI	Don't know Ireland
You feel comfortable talking about your weight, shape or size to your GP.	14.3%	27.4%	47.4 %	46.2%	14.0%	14.8%	17.3%	8.9%	5.6%	1.1%	1.4%	1.5%
You feel comfortable talking about your weight, shape or size to your family.	15.2%	26.6%	50.1%	37.5%	12.0%	18.5%	17.3%	13.9%	3.6%	1.2%	1.8%	2.4%
You feel comfortable talking about your	14.2%	25.0%	42.9 %	35.0%	15.3%	20.1%	19.8%	15.2%	4.6%	1.7%	3.2%	3.0%



Statement	Strongly agree NI	Strongly agree Ireland	Agree NI	Agree Ireland	Neither agree nor disagree NI	Neither agree nor disagree Ireland	Disagree NI	Disagree Ireland	Strongly disagree NI	Strongly disagree Ireland	Don't know NI	Don't know Ireland
weight, shape or size to your friends.												
People with obesity should have the same right as everyone else to receive treatment in the health system.	21.8%	29.4%	58.3%	53.4%	14.3%	12.0%	3.7%	3.6%	0.3%	0.0%	1.6%	1.6%
Most people with obesity are self-conscious about their weight.	19.6%	13.0%	49.7%	51.7%	23.0%	26.4%	4.2%	5.1%	0.6%	1.1%	2.8%	2.7%
People with obesity cannot be good workers compared to	6.8%	3.5%	16.5%	21.4%	22.9%	27.5%	37.5%	29.3%	15.4%	16.5%	0.9%	1.8%

Statement	Strongly agree NI	Strongly agree Ireland	Agree NI	Agree Ireland	Neither agree nor disagree NI	Neither agree nor disagree Ireland	Disagree NI	Disagree Ireland	Strongly disagree NI	Strongly disagree Ireland	Don't know NI	Don't know Ireland
people with a healthy weight.												
I think the media promotes negative stereotypes about people with obesity.	9.5%	17.1%	51.5%	37.0%	27.1%	28.1%	9.5%	13.7%	0.6%	0.4%	1.9%	3.7%
I support advertisements purposely including people with obesity.	8.6%	14.9%	37.2%	40.3%	36.2%	28.2%	12.5%	14.4%	1.5%	0.8%	4.0%	1.3%

**Table 21: Perceived experiences of weight-based discrimination, reported separately for Northern Ireland and Ireland, in a study to understand public attitudes towards obesity and assess public acceptability of policies and wider initiatives to address obesity on the island of Ireland**

Have you ever felt personally discriminated against because of your weight?	Response Yes	Response No
Northern Ireland	Yes 12.1%	No 87.9%
Ireland	Yes 9.7%	No 90.3%

Statement	Very often NI	Very often Ireland	Fairly often NI	Fairly often Ireland	Sometimes NI	Sometimes Ireland	Rarely NI	Rarely Ireland	Never NI	Never Ireland
You have had difficulty obtaining healthcare because of your weight, shape or size.	0.1%	1.1%	2.7%	0.0%	10.5%	23.4%	28.1%	25.6%	58.6%	49.9%
You have been discriminated by healthcare workers because of your weight, shape or size.	0.0%	1.1	2.7%	1.1%	15.3%	27.0%	33.9%	23.4%	48.1%	47.3%
You have been discriminated in public settings / on public	0.0%	1.1	15.6%	14.0%	41.4%	32.5%	20.7%	34.2%	22.4%	18.1%

Statement	Very often NI	Very often Ireland	Fairly often NI	Fairly often Ireland	Sometimes NI	Sometimes Ireland	Rarely NI	Rarely Ireland	Never NI	Never Ireland
transport because of your weight, shape or size.										
You consider yourself a person who has been deprived of opportunities because of your weight, shape or size.	2.7%	4.0	2.4%	2.9%	43.7%	42.8%	23.1%	28.0%	28.1%	22.3%

## **safefood**

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