

Candidate 1 evidence

Topic- How external factors contribute to the risk of obesity.

Research question-How significant are external factors in contributing to obesity?

Objective 1-To explore how external factors contribute to the prevalence of obesity in our population.

Objective 2-To determine how well the general public knows how external factors can contribute to obesity.

Word count (without bibliography and appendix): 4366

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How significant are external factors in contributing to obesity?

Obesity costs the NHS around £6.5 billion a year and is the second biggest preventable cause of cancer.¹ Obesity is defined as the condition of being extremely overweight with a high degree of body fat. It is abnormal or excessive fat accumulation.² Obesity is a form of malnutrition which can lead to various other health conditions and chronic diseases such as certain cancers, cardiovascular disease, hypertension, type 2 diabetes, stroke, muscle & joint problems, liver and respiratory diseases.³ Furthermore, it is linked with reduced life expectancy due to it being a risk factor for all these chronic diseases.⁴ More people than ever before are now living with obesity, with more people who are overweight than underweight across the world.⁵ Global estimates suggest that almost 2.3 billion children and adults are living with obesity or are overweight and if current trends continue, by 2025, 2.7 billion adults could be living an overweight or obese life.⁶

A global obesity pandemic is currently underway. Nevertheless, the prevalence of overweight and obesity among both men and women varies significantly, both within and across nations, with a higher overall presence of obesity observed in women compared to men.⁷ This inequality is particularly prominent among women from developing countries, especially in the Middle East and North Africa.⁸ Controversy, in developed nations, there is a greater number of men categorised as overweight than women.⁹ Existing research indicates that a variety of sociocultural factors worldwide contribute to the widening gender-specific eating habits, with women often indicating a preference for healthier food options, although they may also consume more sugary foods than their male counterparts.¹⁰

In November 2022, 70.8% of black adults were overweight or living with obesity, which was the highest percentage out of all ethnic groups.¹¹ The obesity epidemic in the US has had a particularly specific impact on specific racial and ethnic minority populations. For instance, around 50% of African American women are classified as obese, in contrast only 33% of white women.¹² For the majority of ethnic groups, broader environmental elements are more influential in influencing obesity than the ethnic makeup of the community.¹³

External vs Internal Factors

It is often assumed that the primary cause of obesity is an imbalance between calories consumed and calories expended. Excess energy is formed when we consume more than we burn,¹⁴ and while this is a contributing factor, it may not always be the primary cause. In many cases it is a result of not only internal factors, but external factors such as environmental influences, medication, genetics, high amounts of stress, insufficient physical activity, lack of sleep and other pre-existing health conditions.¹⁵

People who are living with obesity are often blamed for this disease. This sizeism implies that obesity is due to individual failure and places responsibility on the people living with obesity to fix the problem. This can harm the mental and physical welfare and discourage people from seeking guidance and support.¹⁶

It is not just diet and lifestyle that contributes to obesity, external factors including income and geographical location can affect accessibility to more nutritious food, health care support, and opportunities to live an active lifestyle.¹⁷ Environment and life experiences can also contribute to poor mental health which can additionally increase the risk of obesity.¹⁸

Further research indicates that genetics may contribute significantly to the development of obesity.¹⁹ There are three primary genetic subcategories associated with obesity: monogenic, syndromic, and polygenic.²⁰ Monogenic obesity is characterised as severe class three obesity that manifests without any developmental delays.²¹ Syndromic obesity refers to severe obesity associated with neurodevelopmental delay, endocrine abnormalities, sensory impairment, and dysmorphic features.²² Polygenic obesity, often referred to as common obesity, can affect any individual. Any individuals that do suffer typically experience obesity from a young age due to dysfunction in the central nervous system, which results in an excessive appetite (hyperphagia).²³

Genetics

There is now more research suggesting that obesity has a genetic component. It has been identified that there are between 200 to 500 specific genes associated with the condition. These genes can affect lots of different aspects, such as how the body

stores fat, processes nutrients and communicates the feeling of fullness. Various obesity metrics, like BMI, waist to hip ratio, and skinfold thickness show a strong hereditary influence.²⁴

Medication

Further research shows that additional external factors that can result in weight fluctuations include certain medications. For instance weight gain may not be directly attributed to the medication itself, but rather its side effects. Some medications can increase appetite, leading to higher food intake, while others may influence the body's ability to absorb and store glucose.²⁵ These could both result in additional fat accumulation in the abdominal area. Additionally, some medications may slow down calorie burning by reducing the metabolic processes.²⁶ Furthermore, medications that induce shortness of breath and fatigue can discourage, and hinder physical ability. There are also medications that promote water retention, contributing to visible weight gain without necessarily increasing body fat percentage.²⁷ Weight gain is a frequently observed side effect associated with antipsychotic, antidepressant, mood-stabilising, and other medications prescribed for common psychiatric disorders.²⁸ The impact of psychotropic medications on body weight differs depending on the medication category. For example there is a direct link between antipsychosis, and weight gain which is often regarded as a direct consequence of these medications, which is primarily driven by an increase in appetite.²⁹ The specific mechanisms that lead to heightened appetite, particularly for carbohydrates, during psychotropic treatments remain unclear, but what we do know is that there are various metabolic changes linked to these medications.³⁰ Furthermore, the sedative properties of psychotropic medications contribute to reduced physical activity, which falls to offset caloric intake, ultimately leading to weight gain.³¹

Social media and marketing

In addition, another contributing factor is the change in what type of food people are consuming.³² People on low incomes are now able to eat more calories, more animal produce, and more sugar because food processing technology has led to us consuming much more ultra processed foods which leads to a higher calorie intake.³³ In numerous food and drink settings, ultra processed products which contain high levels of sugars, sodium, saturated fats and refined carbohydrates are

more accessible and readily available than more natural products,³⁴ which is greatly contributing to the current obesity epidemic. The selection of these items is further influenced by attractive marketing strategies and their widespread presence. Both instore and online social media has a big impact on food choice. They are also made to be cheap, convenient and more affordable for the consumers and also made in a way in which there is less money spent by the manufacturer, increasing their profits.³⁵ This is achieved by adding salt, sugar and other artificial additives, contributing to the overall obesity epidemic.

Obesity in children

The UK is still facing a childhood obesity epidemic, with almost one in five children leaving primary school obese.³⁶ Children who are overweight are more likely to be overweight as adults.³⁷ In support, this review concludes that around 55% of obese children go on to be obese in adolescence.³⁸ From this, around 80% of obese adolescents will be obese in adulthood with around 70% remaining obese over the age of 30.³⁹

The increase in the population of overweight children is concerning, as it can result in health issues and may lead to social difficulties.⁴⁰ Children who are overweight are at a higher risk of being bullied by peers and experiencing issues related to low self esteem or negative body image.⁴¹ Detrimental short and long term psychological and emotional impacts both individuals and their parents or carers. This can lead to mental health conditions like anxiety and depression,⁴² unhealthy weight control behaviours (anorexia nervosa, bulimia nervosa, binge eating disorder). Weight based discrimination, particularly for girls, from peers in schools is high and children who experience it are more likely to struggle with body dissatisfaction, social anxiety, loneliness and somatic symptoms.⁴³ This marginalised position in society can result in social and academic disparities for children living with obesity, such as being excluded from social networks, and therefore they have lower performance and involvement in school.⁴⁴

Families can support children and prevent obesity by creating a balanced diet plan (including new recipes or adding more vegetables/nutrient rich foods to recipes they already enjoy), engaging in more physical activities together as a family, establishing

regular sleep schedules, swapping out screen time for quality family time, promoting obesity prevention in early childhood education and looking for a family healthy weight program to join.⁴⁵

Summary

Numerous approaches such as prioritising sleep, eating more fibre and protein, exercise (can be as simple as walking places instead of driving), reducing calories, limiting alcohol, trying stress relief activities and staying hydrated will help lead to long term effective weight loss.⁴⁶ A holistic approach needs to be considered when tackling obesity which requires collaboration between individuals and organisations, like the UK government, World Health Federation and Obesity UK, to establish communities and frameworks that promote healthy and active living for everyone.⁴⁷

Research plan

Research Question: How significant are external factors in contributing to obesity?

The researcher decided to conduct an interview with an expert - who is a band 5 community dietician within NHS Ayrshire and Arran for the first research technique. This provided the researcher with reliable qualitative data, that was detailed due to the dietician being qualified to give an in-depth response to the 10 questions. The dietician was able to clarify any points that were not clear or accurate from the research. This interview took place through email.

The researcher decided to conduct a questionnaire as the second research technique. Data collection can occur in a timely manner since the researcher does not need to be physically present during the completion of the questionnaires. Typically, a questionnaire incorporates both open-ended questions and close-ended questions, allowing for the gathering of both qualitative and quantitative data, which is advantageous to gain more depth. The questionnaire consisted of 13 questions, including open and closed questions in which participants had the option of 'other' when necessary, where they could briefly describe another option, ensuring the research was not restricted. Conducting a questionnaire was a fitting way of gathering information as 65 people responded, which gave a wide variety of people that were representative of the overall population, and did not restrict the research.

Interview

Objective 1:

To explore how external factors contribute to the prevalence of obesity in our population.

What is your role?

I am a Band 5 community dietitian within NHS Ayrshire and Arran.

1. What are the most effective strategies you believe can be implemented by the NHS to promote healthy eating and physical exercise among the general population and to combat obesity levels?

Targeting schools – nutrition education sessions. Cooking sessions – a lot of people don't know how to cook, resulting in a greater use of ready meals/takeaways/snacking. Lifestyle change sessions - I feel that one of the biggest barriers to overcome is making changes to lifestyle patterns and having the motivation to make changes and not slip into old habits. **Social media campaigns from reliable sources. Portion control education.**

2. Are there any tried and tested initiatives in the NHS that are helping to address the obesity crisis?

Type 2 diabetes remission groups are also available which helps to tackle T2DM and obesity.

3. How do you think programmes in the community can help in preventing obesity, and what specific initiatives have you seen that work well?

Within NHS Ayrshire and Arran, there is an initiative called 'Weigh to go Ayrshire' which is a weight management programme delivered within the community for outpatients aged 16 and over who have a BMI > 28 kg/m².

4. Can you describe the importance of mental health in relation to obesity prevention? How can we address emotional eating in our prevention efforts?

Mental state and mental wellbeing have a huge impact on how we act and react to eating. Educating people who may suffer from emotional eating on strategies to

overcome. Identifying strategies to tackle emotional eating that works for the individual best. Keeping a journal to identify triggers. Healthy alternatives – stock up on healthier food options so a 'binge' on unhealthy snacks isn't available. Educating the public on coping mechanisms. Encouraging routine eating – to prevent feelings of hunger and impulsive eating such as emotions. Mindful eating – focus on the texture, taste, and smell of food to appreciate and enjoy meals more.

5. How can families create a supportive environment at home that encourages healthy habits and prevents obesity?

Structure and routine to eating i.e. set meals and mealtimes, involve everyone in meal planning/prepping/cooking, create a positive meal time atmosphere, be mindful of portion sizes – understand what a portion size looks like for different people/ages, understanding when you are hungry and when you are full, celebrating healthy eating, Trying new foods/recipes, making healthy foods accessible, everything is good in moderation, certain food shouldn't be labelled as good or bad.

6. What are some common misconceptions about obesity that you think need to be addressed in public health campaigns?

Obesity is a choice – there are a range of factors that impact someone becoming obese such as health conditions, socioeconomic factors, mental health.

7. What are some barriers you see that prevent people from adopting healthier lifestyles, and how can we overcome them?

Barriers include Shift work, low income, lack of motivation, stress, children, poor cooking ability, poor mental health, negative relationship with food/body image. The first step in overcoming these barriers is to identify the problem/s and implement strategies to change/improve. Setting small realistic and achievable goals. Food diaries, kcal counting, stress management techniques, ask for support from family/friends, focusing on non-scale victories.

8. How does socioeconomic status influence obesity rates, and what can be done to ensure that healthy options are available to everyone?

Generally, evidence suggests that people from a low-income household, poorer geographical areas, families with lower education are more likely to be obese. People are unable to afford healthy food options, are unsure how to cook meals and opt for convenience meals, shift patterns affect intake/time constraints, making healthier food choice/options available at food banks, and practical cooking sessions.

9. How can we better educate the public about nutrition and physical activity to prevent obesity from a young age?

School education sessions – Introducing nutrition from a young age and re-iterating healthy eating and lifestyle principles throughout their primary and secondary education. Giving an understanding of kcal – as many people do not understand the value and what they look like/mean in terms of portion sizes/daily intake. PACE labels – this is an upcoming strategy that in my opinion would help people understand the value of kcals.

10. How do you believe cultural factors influence dietary habits and obesity rates among different racial and ethnic groups?

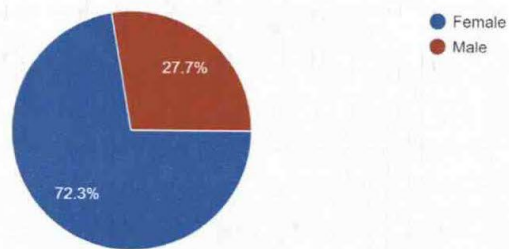
There is evidence that suggests/highlights that certain cultures/ethnic groups/races are more likely to be diagnosed with certain health conditions, like obesity. This is likely due to different dietary patterns/exclusion of certain foods.

Questionnaire

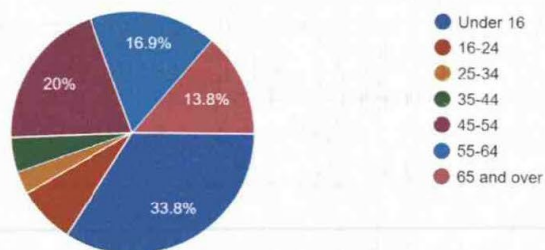
Objective 2:

To determine how well the general public knows how external factors can contribute to obesity.

What is your gender?
65 responses

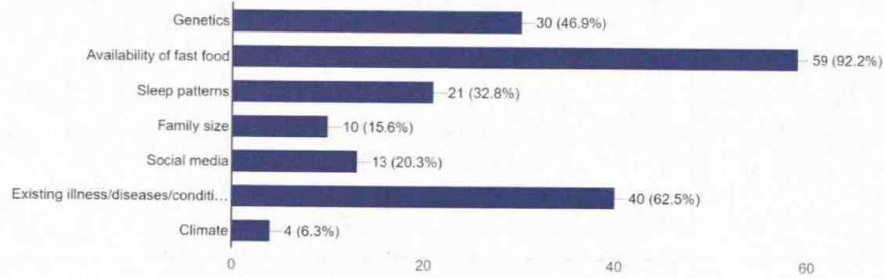


How old are you?
65 responses



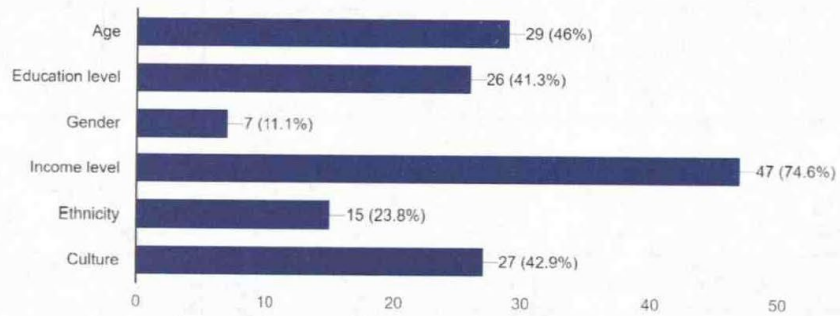
Which of the following do you think is a significant external/environmental factor that can contribute to obesity?

64 responses



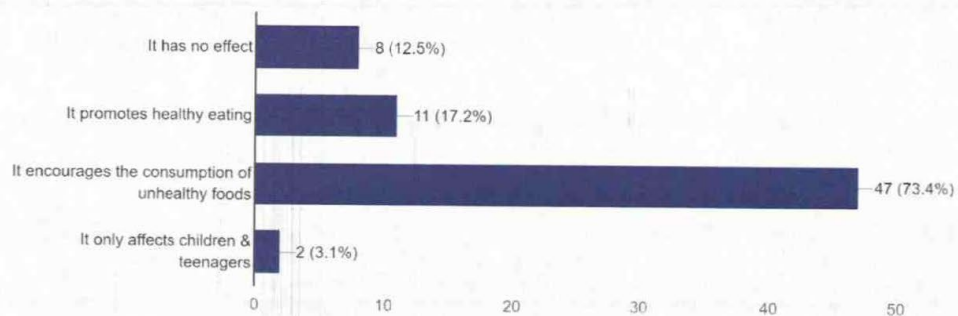
Which of the following socio-economic/cultural factors do you believe impacts on risks of obesity?

63 responses



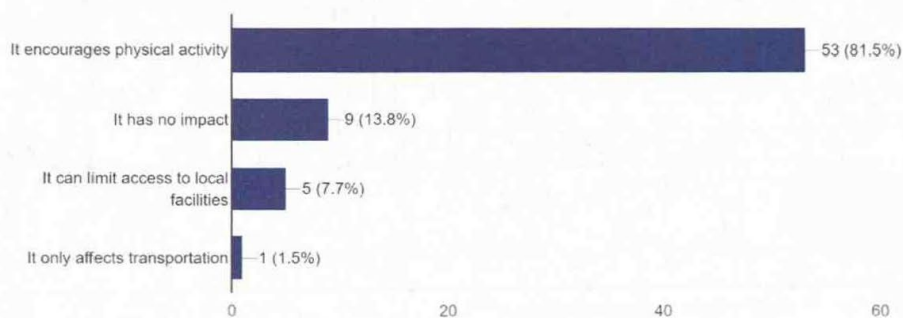
How do you think advertising impact obesity?

64 responses



Do you think that parks, community centres, green spaces etc encourage a more physical lifestyle?

65 responses



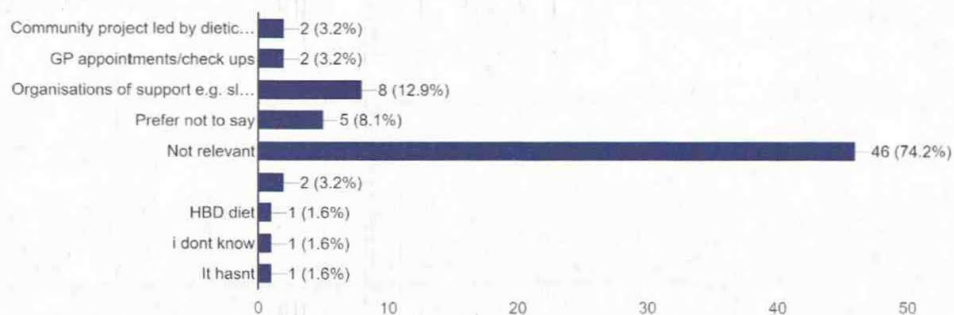
What strategies do you think could help most to reduce obesity levels in Scotland?

65 responses



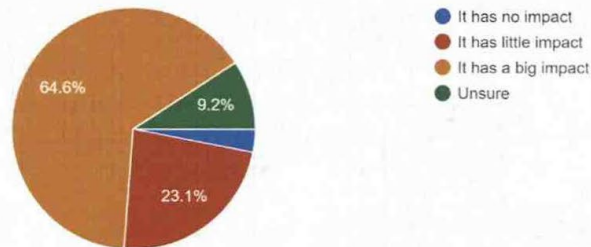
If you have struggled with weight fluctuations how has this been addressed by the NHS?

62 responses



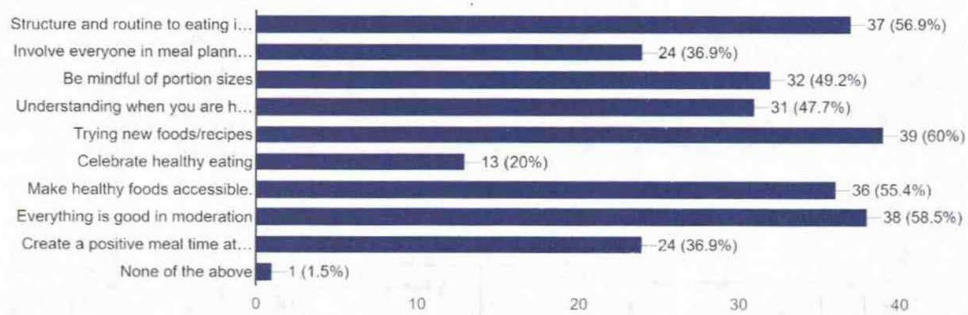
Do you believe mental health impacts on obesity?

65 responses



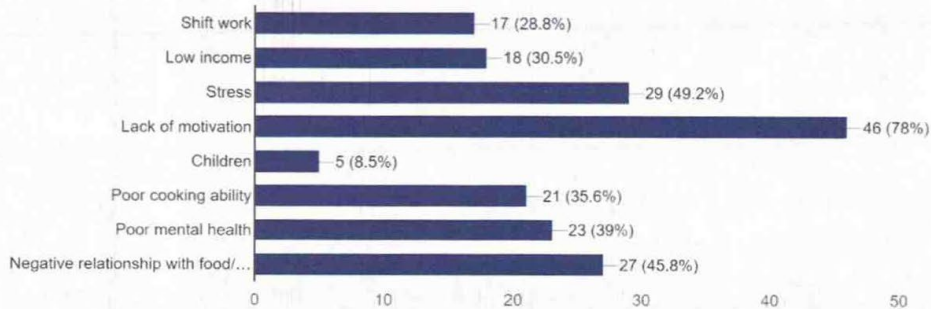
In your household, how are healthy eating habits encouraged?

65 responses



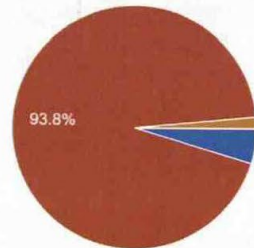
What barriers do you think prevent you from prioritising a healthier lifestyle?

59 responses



Have you ever accessed a food bank?

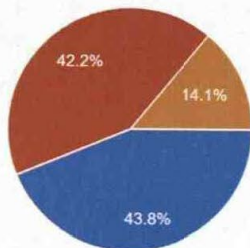
65 responses



- Yes
- No
- Prefer not to say

Were you/are you taught at school how to eat a healthy diet?

64 responses



- Yes
- No
- Unsure

Analysis

In the literature review the researcher identified mental health can have an impact on the risk of obesity “this can lead to mental health conditions like anxiety and depression, unhealthy weight control behaviours such as anorexia nervosa, bulimia nervosa and binge eating disorder”. This relates to question 4 in the interview in which the expert identifies that “mental state and mental wellbeing has a huge impact on how we act and react to eating. Furthermore, the questionnaire asks how people believe mental health impacts obesity and 64.6% of respondents agreed that it has a big impact. Therefore, it can be concluded that mental health significantly contributes to obesity and people who have struggles with mental health are at a higher risk of becoming obese.

In the literature review, the researcher found that “it is often assumed that the primary cause of obesity is an imbalance between calories consumed and calories expended...and while this is a contributing factor it may not always be the primary cause”. This links to the interviewee identifying that a common misconception about obesity that needs to be addressed in public health campaigns is that obesity is a choice. Therefore, it can be said that the public tends to believe that obesity is something that people suffering with it can always control and it places the blame on them, this gives reason for it to be addressed in public health campaigns.

In the literature review the researcher explored the childhood obesity epidemic “with almost one in five children leaving primary school obese”. This relates to the interview in which the researcher asked about effective strategies that could be implemented by the NHS to promote healthy eating and physical exercise to help combat obesity levels and the interviewee suggested targeting schools e.g. nutrition sessions to educate about the importance of health and preventing obesity. Furthermore, the questionnaire asked the public which strategies they believed could help most to reduce obesity levels in Scotland and 78.5% of respondents voted for the option to target schools e.g. nutrition sessions. Therefore, it is crucial to educate about the risks of obesity from an early age more projects should be introduced by the NHS in which they carry out obesity education and prevention sessions around the country in every school for young people.

A lack of motivation was identified by the interviewee as a barrier that prevents people from adopting healthier lifestyles. When given options in the questionnaire as to what barriers the public struggle with when prioritising a healthier lifestyle, 78% of the respondents voted for lack of motivation, showing that this is something most people struggle with. This highlights a significant struggle and needs to be addressed so that people can better themselves and improve health and lifestyle.

In the literature review the researcher identified that stress is an external factor that contributes to obesity and that stress relief activities will help lead to long term effective weight loss. This links to the interview when the interviewee identified stress as a barrier that prevents people from adopting healthier lifestyles, they also stated that stress management techniques can be one of the ways to help overcome the barriers. Furthermore, in the questionnaire 49.2% of respondents voted stress as a barrier they face when prioritising a healthier lifestyle. Therefore, it can be concluded that stress is a major contributing factor to obesity, and individuals who struggle with managing stress are at a higher risk of obesity.

The researcher identified that the selection of ultra processed foods is significantly influenced by attractive marketing techniques. This finding aligns with the questionnaire results, where 73.4% of respondents agreed advertising encourages the consumption of unhealthy foods. This indicates that many consumers are aware of the unhealthy nature of promoted foods. Both the literature review and the questionnaire results demonstrate that marketing and advertising increases and encourages the consumption of ultra processed foods/unhealthy foods which increases the risks of obesity as these types of foods are energy dense.

In the literature review the researcher found that the obesity epidemic has a "specific impact on specific racial and ethnic minority populations". This connects to the interviewee stating that there is evidence that suggests that certain cultures/ethnic groups/races are more likely to be diagnosed with certain health conditions like obesity. Furthermore, in the questionnaire, ethnicity was voted by 23.8% and culture by 42.9% (together 66.7%) as an impacting factor of obesity. Therefore, it can be concluded that culture/ethnicity can be an external factor which heightens the risk of obesity for minorities.

The researcher found that genetics are a contributing factor that increases the risk of obesity "obesity has a genetic component". This corresponds with 46.9% of respondents in the questionnaire voting genetics as a significant external factor that can contribute to obesity. Therefore, it can be concluded that genetics does play a role in the risks of obesity as it increases said risk, also it can be said that while almost half of the general public are aware of the genetic influence, a lot of people still do not know about it - this tells us that there needs to be more education around it.

In the literature review the researcher found that geographical location is another external factor that contributes to obesity as it can "affect accessibility to more nutritious food, health care support, and opportunities to live an active lifestyle". This corresponds with interviewees stating that people from poorer geographical areas are more likely to be obese. Furthermore, it links to the question on if the respondents think that parks, community centres, green spaces etc encourage a more physical lifestyle, in which 81.5% of the respondents voted that it encourages physical activity. Therefore, it can be proven that residents living in poorer geographical areas which lack parks, community centres and green spaces are at a greater risk of becoming obese as they are not encouraged to take part in physical activity in their environment.

In the literature review the researcher found that income is another external factor that contributes to obesity as it can "affect accessibility to more nutritious food, health care support, and opportunities to live an active lifestyle". This links to the interviewee identifying that people from a low-income household are more likely to be obese. Furthermore, it links to the question on which socioeconomic factors the public believe impacts the risks of obesity in which 74.6% agreed that income level is one. Therefore, it can be concluded that income level is a notable contributing factor to obesity and people who are on a low income are at a higher risk of obesity.

In the literature review the researcher found ways for families to support and encourage healthy eating "creating a balanced diet plan (including new recipes or adding more vegetables/nutrient rich foods to recipes they already enjoy)". This links to the interviewee suggesting that trying new foods/recipes can help create a supportive environment at home that encourages healthy habits and prevents

obesity. Furthermore, this links to the question on how healthy eating habits are encouraged in people's households, where 60% of respondents said that trying new foods/recipes is the biggest contributor to their supportive environment. Therefore, this highlights that exploring new foods and recipes is one of the most effective ways to prevent obesity or support family members who are obese.

Evaluation

Overall, the research carried out was successful and backed up the literature review.

The literature review cited sources from websites/articles that were credible, relevant and up to date, with information on obesity and the contributing external factors, resulting in the research being valid.

In the literature review there was research done into how medications affect weight gain and how it impacts obesity risk and levels overall. The researcher did not bring this up in the interview or questionnaire. Further study was conducted, it would be interesting to research further into this external factor and to investigate if it could be prevented.

One way the literature review could be improved would be to increase the depth of research by using additional sources, for example, journals and books relevant to the topic to gain more knowledge and gather more information.

The interview added information from a reliable, professional expert whose opinion and knowledge on the research adds credibility, meaning that the information gained from the interview is valid as the interviewee is a specialist on the subject. This is good as she has expertise that means the information is accurate, unbiased and reliable, making the report valid and trustworthy.

The interview was done via email and the interviewee answered prepared questions, this could have been improved by conducting the interview face to face, this could have led to a two-way conversation which would have meant the conversation followed natural progression, different, more appropriate questions may have arisen, and certain points could have been clarified.

If the interview was conducted again the researcher would have asked about how genetics can affect the risk of obesity for individuals - as this was found in the literature review and asked about in the questionnaire - it would be interesting to see if the interviewee's response backed up the other research.

Another addition to the interview if conducted again would be to ask the expert about lack of motivation as this was a topic that came up in the literature review and the

questionnaire, it would be interesting to see if the interviewee's response backed up the other research.

In the interview the expert identified targeting schools e.g. nutrition sessions as an effective strategy that could be implemented by the NHS to promote healthy eating and physical exercise to help combat obesity levels. If further study was conducted, it would be interesting to look further into this aspect as it was suggested by the expert to educate about the importance of health and preventing obesity.

Another way the interview could be improved would be if more than one expert was interviewed, this would have meant more than one opinion was considered which may have improved accuracy or brought up other areas to consider.

Lastly, a question about whether medication use is involved in weight gain should have been included in the interview as this was a section in the literature review.

The questionnaire resulted in quite a small sample size of responses. This meant it was easy to interpret the data, and no specific software was needed but this may also have skewed the data. This could have been improved if the data set was larger and included more equal distribution across the age groups or geographical distribution for example as this would give a better representation of the general population.

If the questionnaire was to be improved, the researcher would ask the general public if they believe obesity is a choice or if they believe it cannot always be controlled by the individual directly - as this was a topic that came up in the literature review and was mentioned by the expert in the interview - as it would be interesting to see if the responses backed up the other research.

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41. [The Relationship Between Peer Bullying and Anxiety-Depression Levels in Children With Obesity - PMC](#) (5/9/2024)

42. [The Relationship Between Peer Bullying and Anxiety-Depression Levels in Children With Obesity - PMC \(5/9/2024\)](#)
43. [Emotional Implications of Weight Stigma across Middle School: The Role of Weight-Based Peer Discrimination - PMC \(9/9/2024\)](#)
44. [The Complexity and Stigma of Pediatric Obesity - PMC \(9/9/2024\)](#)
45. [Preventing Childhood Obesity: 6 Things Families Can Do | Obesity | CDC \(20/1/2025\)](#)
46. [The Connection Between Diet, Exercise, and Sleep \(9/9/2024\)](#)
47. [Holistic Obesity Management: Achieving Sustainable Weight Loss with Physician Guidance: Jazz Psychiatry: Psychiatrists \(9/9/2024\)](#)

Appendices

Blank copy of questionnaire:

Obesity & External Factors

Form description _____

What is your gender?

- Female
- Male

How old are you?

- Under 16
- 16-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65 and over

Which of the following do you think is a significant external/environmental factor that can contribute to obesity?

- Genetics
- Availability of fast food
- Sleep patterns
- Family size
- Social media
- Existing illness/diseases/conditions
- Climate

Which of the following socio-economic/cultural factors do you believe impacts on risks of obesity?

- Age
- Education level
- Gender
- Income level
- Ethnicity
- Culture

How do you think advertising impact obesity?

- It has no effect
- It promotes healthy eating
- It encourages the consumption of unhealthy foods
- It only affects children & teenagers

Do you think that parks, community centres, green spaces etc encourage a more physical lifestyle?

- It encourages physical activity
- It has no impact
- It can limit access to local facilities
- It only affects transportation

What strategies do you think could help most to reduce obesity levels in Scotland?

- Cooking sessions
- Lifestyle change sessions
- Social media campaigns from reliable sources
- Portion control education
- Targeting schools e.g. nutrition education sessions

If you have struggled with weight fluctuations how has this been addressed by the NHS?

- Community project led by dieticians
- GP appointments/check ups
- Organisations of support e.g. slimming world
- Prefer not to say
- Not relevant
- Other..

Do you believe mental health impacts on obesity?

- It has no impact
- It has little impact
- It has a big impact
- Unsure

In your household, how are healthy eating habits encouraged?

- Structure and routine to eating ie set meals and mealtimes.
- Involve everyone in meal planning/prepping/cooking
- Be mindful of portion sizes
- Understanding when you are hungry and when you are full.
- Trying new foods/recipes
- Celebrate healthy eating
- Make healthy foods accessible.
- Everything is good in moderation
- Create a positive meal time atmosphere
- None of the above

What barriers do you think prevent you from prioritising a healthier lifestyle?

- Shift work
- Low income
- Stress
- Lack of motivation
- Children
- Poor cooking ability
- Poor mental health
- Negative relationship with food/body image

Have you ever accessed a food bank?

- Yes
- No
- Prefer not to say

Were you/are you taught at school how to eat a healthy diet?

- Yes
- No
- Unsure

Candidate 2 evidence

Advanced higher HFT project

Convenience Vs Consequence:

The growth, influence and promotion of fast foods.

Word count: 4346

The effect of takeaways on our health

The growing trend of families increasingly opting for takeaway meals has become a common occurrence. However, many of these meals are typically rich in saturated fats, sodium, and sugars, nutritional components that are known to have detrimental effects on long term health. *In the 12 months to June 2023, the number of UK consumers who ate in fast food outlets increased to 45%¹.* Apps like Just Eat and Uber Eats can be held partly responsible for this trend. These platforms are specifically designed to attract users by offering the convenience of having their preferred meals delivered directly to their doorstep. As a result, individuals are less inclined to leave their homes to collect food, leading to a decrease in physical activity and further reducing the amount of daily exercise they engage in. This ease of access not only promotes sedentary behaviour but also reinforces unhealthy lifestyle choices. *About 70% of customers prefer ordering food online and want it to be delivered.²*

Salt, fats and sugars

The dietary goal for salt is to limit the consumption to a maximum of 6g per day. Takeaway meals can often lead to exceeding this recommended limit unknowingly.

¹ <https://store.mintel.com/report/uk-fast-food-restaurants-market-report#:~:text=UK%20Fast%20Food%20Market%20Trends,a%20takeaway%20dropped%20by%205%25.>

² <https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://maddmobile.com/blog/online-ordering-stats/%23:~:text%3DAbout%252070%2525%2520of%2520customers%2520prefer,than%2520those%2520who%2520don%27t.&ved=2ahUKEwiy3oSz-NmIAxWBWEEAHRXKCPsQFnoECBkQAw&usg=AOvVaw07ekRhvGtsX4uVzlh0t8Nt>

Some dishes alone contain more than double the entire dietary goal for salt.³ A diet high in sodium can increase your blood pressure which can lead to heart diseases and strokes. Hypertension affects a quarter of the British adult population and accounts for 60% of all strokes in the UK and half of the heart attacks.⁴ This statistic underscores the detrimental impact that excessive sodium consumption can have on our overall health. Evaluating the sodium content in a meal can be complex, and many individuals are unwilling to invest or don't have the knowledge required. Fats play a crucial role in bad lifestyle choices. Many fast foods are filled with saturated fats. A Double Quarter Pounder with cheese has 740 calories, 42g fat, 20g saturated fat⁵ A diet high in saturated fats can cause obesity, heart disease and bad cholesterol. Foods that are linked to saturated fats are butter, oils and cream. In fast food restaurant it is common for foods to be made with oil and butter. In one portion of fries, it is 14% oil and 86% potato. ⁶ Fast foods are often high in sugar and other unhealthy ingredients. Too much sugar can harm your health in several ways. It can damage tooth enamel, causing cavities, tooth decay, and even tooth loss, along with pain and discomfort. Excess sugar can also raise blood pressure by narrowing blood vessels, increasing the risk of type 2 diabetes, heart attacks, and strokes. To prevent these serious health problems, it's important to watch how much sugar we consume,

³ [https://www.bhf.org.uk/information-support/heart-matters-magazine/nutrition/sugar-salt-and-fat/salt-in-fast-food-meals#:~:text=When%20you're%20eating%20fast,6g%20\(about%20one%20teaspoon](https://www.bhf.org.uk/information-support/heart-matters-magazine/nutrition/sugar-salt-and-fat/salt-in-fast-food-meals#:~:text=When%20you're%20eating%20fast,6g%20(about%20one%20teaspoon)

⁴ <https://www.theguardian.com/society/2012/jan/08/high-blood-pressure-mark-honigsbaum#:~:text=Hypertension%20affects%20a%20quarter%20of,silent%20killer%2C%22%20says,%20MacGregor.>

⁵ <https://www.medicalnewstoday.com/articles/324847#:~:text=Fast%20food%20tends%20to%20be,and%20processed%20preservatives%20and%20ingredients.>

⁶ <https://www.mcdonalds.com/gb/en-gb/help/faq/what-percentage-of-mcdonald-s-fries-are-actually-potato.html#:~:text=The%20cooked%20Fries%20will%20therefore,remaining%2014%25%20being%20vegetable%20oil.>

especially from fast foods and takeaways. From the Chinese, to order a sweet and sour chicken it contains 80.978g of sugar.⁷ Adults should have no more than 30g of free sugars a day, (roughly equivalent to 7 sugar cubes). This shows us that adults who order sweet and sour chicken from the Chinese are having over double the amounts of sugar than recommended, further leading to health issues.

Family circumstances

Takeaway meals provide a fast and convenient solution for feeding a family, offering a widespread accessibility and the perception of affordability when a meal for the entire household can be obtained for under £20. *'Nearly half brits have a takeaway up to 4 times a week.'*⁸ When one or both parents work late into the evening, finding time to prepare a nutritious meal at home can be challenging. In contrast, opting for fast food becomes a convenient and effortless alternative. *'67% of people said they eat fast food because it's convenient'*⁹ When children participate in evening clubs or social activities, families may be more inclined to opt for takeaway meals due to the limited time available for meal preparation. After a long and demanding workday, many families may lack the energy to prepare a home cooked meal, leading them to choose the convenience of takeaway options instead. *'It's undeniably hard for*

⁷ [Sugar Buster - The High Sugar Takeaways to Avoid Benenden Health](https://www.benenden.co.uk/healthy-nutrition)<https://www.benenden.co.uk/healthy-nutrition>

⁸ https://www.google.com/url?sa=t&source=web&rct=i&opi=89978449&url=https://niniakitchen.co.uk/fast-food-cms-page.takeaway%23:~:text=3DThe%2520research%2520proved%2520the%2520UK,to%2520four%2520times%2520a%2520week.&ved=2ahUKEwi_tobvgZaIAxVNVUEAHYgNB7AQFnoEC CAQAw&usg=AOvVaw1SMFT93M3Ut7Brj9-jgUFI

⁹ <https://aytm.com/post/fast-food-survey-2>

parents to get a meal on the table when they've both worked a long day and have minimal time."¹⁰ These various factors contribute to an increased likelihood of families opting for takeaway meals. A further point is nutritional knowledge. Food choices are influenced by the persons knowledge a person has on health benefits of foods and the impact it has on their body. If a family has very little knowledge, then they may opt into buying a takeaway as it is premade and there is no stress about how to make a meal. It is also very common for people to have takeaways to reward good behaviour, or as a treat. 42% of people said a takeaway remains a treat. ¹¹

Poverty

Poverty can significantly influence consumer food choices, particularly regarding takeaway meals. For individuals facing poverty, purchasing a single meal from a fast food restaurant may appear to be more cost effective than buying multiple ingredients required to prepare a home cooked meal. However, *Convenience foods from fast food tend to be more expensive than those bought from grocery stores.* ¹² Furthermore, individuals living in poverty may lack access to basic cooking equipment, leaving them with limited options and often forcing them to rely on pre-

¹⁰

https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.blueprintnutrition.ca/family-meals-matter-benefits-barriers-solutions-to-eat-more-family-meals/&ved=2ahUKEwibjqaryt6IAxXiX0EAHZokOpgQFn0ECB0QAO&usg=AOvVaw3oTR_WDc9IVuHpdws_DEP_-

¹¹ <https://www.bbc.co.uk/news/business-50742094#:~:text=Perhaps%20surprisingly%2C%20the%20most%20common,a%20takeaway%20remains%20a%20treat.>

¹²

<https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.usda.gov/media/blog/2018/07/24/what-drives-consumers-purchase-convenience-foods&ved=2ahUKEwji67atzd6IAxX8T0EAHf3EGoAQFnoECB0QAO&usg=AOvVaw25xx1UFcxdlXpbSu2xbT1f>

made or ready to eat meals. *Children from poorer areas are disproportionately exposed to takeaways, and poorer areas also have more visible advertising for unhealthy foods than wealthier areas.*¹³ This highlights the unequal exposure to unhealthy food options between socioeconomic groups, suggesting that children from lower income areas are at a greater risk of developing poor dietary habits. This further means that people in poverty are more likely to have a diet high in saturated fats, sodium and sugars which can negatively impact their physical and mental health.

Marketing

Takeaway ads are crafted to trigger cravings by presenting food in a highly appealing way, often making viewers want to buy it, despite its poor nutritional value. Celebrity endorsements further enhance this effect, as people are more inclined to indulge in unhealthy eating when promoted by their favourite public figures. *Researchers asked 3,394 11- 19-year-olds from across the UK where they had seen advertising that month for food and drink high in fat, sugar and salt. 64% saw influencers promoting unhealthy foods*¹⁴. This shows us that children are especially susceptible to buying unhealthy foods when influenced by admired figures. For example, McDonald's 2023 Valentine's Day promotion featuring Cardi B, and her husband likely encouraged

¹³

https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.paediatricfoam.com/2021/02/diet-and-social-deprivation/%23:~:text=3DChildren%2520from%2520poorer%2520areas%2520are,unhealthy%2520foods%2520than%2520wealthier%2520areas.&ved=2ahUKEwj98NHTZaIAxVqWUEAHUHpGZsQFnoECBIQAw&usg=AQvVaw3_vQlr5ACh3jVhr4pQBM55

¹⁴ <https://news.cancerresearchuk.org/2020/12/18/86-of-teens-exposed-to-junk-food-ads-on-social-media/>

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¹⁴ <https://news.cancerresearchuk.org/2020/12/18/86-of-teens-exposed-to-junk-food-ads-on-social-media/>

many to choose McDonald's, reinforcing poor dietary habits and normalising unhealthy food choices. *A scoping review of 53 studies found that the majority of advertised foods were unhealthy, with a mean of 63%.*¹⁵

With 63% of the advertised foods being unhealthy, it suggests that consumers are regularly exposed to marketing that encourages poor dietary choices, which could contribute to unhealthy eating habits and related health issues.

Mental health

Fast food has long been linked to happiness and satisfaction, but these effects are short lived. Many believe it temporarily boosts serotonin, offering brief emotional or psychological relief. *When in fact, fast foods can disrupt the balance of gut bacteria, affecting the production of the neurotransmitter serotonin.*¹⁶ Serotonin is a hormone responsible for stabilizing mood and regulating feelings of well being and happiness. Insufficient production of serotonin in the body is often linked to mental health issues such as depression and anxiety. *Consumers of fast food are 51% more likely to develop depression compared to those who eat little or none*¹⁷. This shows us that majority people consuming fast foods regularly are at a higher risk of having mental illnesses. *Fast foods which are high in saturated fats, trans fats, and omega 6 fatty*

¹⁵

<https://www.google.com/url?sa=t&source=web&rc=1&opi=89978449&url=https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9330687/%23~:text=3DResults,eating%2520behaviour%2520or%2520health%2520outcomes.&ved=2ahUKEwiUxfqyP-IAxW22QIHHQ0BAAb0Q-tANegQIBxAF&usq=AOvVaw2i579o43t9aYV8bMLk-YFv>

¹⁶ <https://intermountainhealthcare.org/blogs/fast-food-depression-link>

¹⁷ <https://intermountainhealthcare.org/blogs/fast-food-depression-link#>

acids can trigger an inflammatory¹⁸ It is common for people who are upset or struggling emotionally to crave unhealthy things, but ironically, these choices can make them feel worse instead of better.

Phone apps

Phone apps such as just eat, are a simple few clicks then the meal you have been craving is on its way to your door. *In 2023, Just Eat was the second most downloaded food delivery app in the UK, with about 2.4 million downloads.*¹⁹ Apps like Just Eat effectively attract consumers by displaying images of food, triggering cravings that drive them to make a purchase. Additionally, these apps contribute to reduced physical activity, as users can simply order food from the comforting of their homes, eliminating the need to go out and collect it themselves. Despite the drawbacks, consuming fast food in moderation raises the question: what real harm does it cause? Fast food can provide benefits, such as enabling people with disabilities to enjoy meals as easily as others, offering families an opportunity to spend time together without the hassle of dining out, and giving parents a reprieve from cooking. However, the lack of physical activity that often accompanies takeaway

¹⁸

<https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://intermountainhealthcare.org/blogs/fast-food-depression-link%23:~:text=3DFast%2520food%2520is%2520typically%2520high,who%2520eat%2520little%2520or%2520none.&ved=2ahUKEwimgPewKeIAxWkWKkEAHZMwDbwQFnoECBwQAw&usg=AOvVaw3megk21Vl4k5B98gtEHagp>

¹⁹

https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.statista.com/statistics/1298186/food-delivery-app-downloads-uk/%23:~:text=3DMain%2520food%2520delivery%2520apps%2520in%2520the%2520UK%25202023%252C%2520by%2520downloads%26text=3DWith%2520over%2520twelve%2520million%2520downloads,with%2520over%25202.3%2520million%2520downloads.&ved=2ahUKEwis_d3yxv-IAxXwwwIHHZP4Fr4Q-tANegQIDRAF&usg=AOvVaw1E4EssFziSLGVmzCtNfURZ

consumption means that excess energy from the meal is stored as fat in the body, potentially leading to obesity. It is common for people to not exercise before or after having a takeaway meal. *'In 2023, we served a total of 84 million active consumers across our segments.*²⁰ This shows that people who don't burn off the extra energy from these meals are more likely to become obese. Without enough physical activity, the unused energy is stored as fat, which can harm their health.

The rise

Not only is it just savoury unhealthy meals that are takeaways, but in recent years its apparent for deserts, bulging with chocolate, sugar and sweets to be ordered and enjoyed in a takeaway shop, or at home. There have been many recent life events which has caused people to order takeaways more often than not, such as Covid-19. Covid was a pandemic where people were strained to their houses for up to 2 years. This meant that some people couldn't leave their house due to various health issues and so due to convenience, they would order a takeaway. *"Takeaways and meal delivery grew by more than 50% during the pandemic and have stayed high thereafter"*²¹ As these people couldn't leave their home due to the laws, they were also not getting any exercise which meant that they weren't burning off excess energy which will now be stored and converted into fat in the body leading to health conditions such as obesity and coronary heart disease. people are now consuming

²⁰ <https://www.justeattakeaway.com/annual-reports#:~:text=Across%20the%20four%20segments%2C%20Just,active%20consumers%20across%20our%20segments.>

²¹ <https://ifs.org.uk/news/takeaways-and-meal-delivery-grew-more-50-during-pandemic-and-have-stayed-high-thereafter>

takeaways up to 3 times a week. *57% of consumers order takeaway three times a week.*²²

²² <https://dineoutmagazine.co.uk/story.php?s=2022-10-11-57-of-consumers-order-takeaway-three-times-a-week#:~:text=57%25%20of%20consumers%20order%20take%20away%20three%20times%20a%20week>

Research question- What are the long term health effects of frequent takeaway consumption?

Objectives

- 1) To assess consumer awareness of the health impacts associated with takeaway food consumption.
- 2) To evaluate the extent to which marketing strategies influence consumer food choices regarding takeaways.

Research plan

Research technique 1: Questionnaire

Respondent descriptor: 98 randomly selected school pupils and teachers, ages 12+, in academy.

Questionnaires are useful for collecting data as they allow researchers to efficiently gather specific information from a target audience. By reaching a wide group of respondents, they help identify patterns of opinions relevant to the research objectives.

For reliable results, a questionnaire should ideally have over 20 participants. This study collected data from 98 randomly selected pupils and teachers (ages 12+) at Academy. A larger sample helps ensure broader representation, increasing validity and reducing individual biases.

This research method is effective due to its affordability, speed, and ease of use.

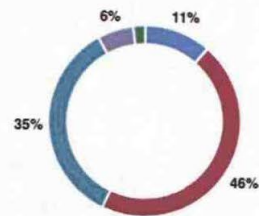
Since questionnaires require minimal resources and can be distributed quickly, they are convenient for both researchers and participants. Using a digital platform further streamlined the process, allowing faster response collection.

Closed questions simplify the response process, making it quicker for participants and ensuring consistent answers. This also facilitates straightforward data analysis. In this study, the questionnaire consisted of 19 closed questions, ensuring clarity and structure in responses.

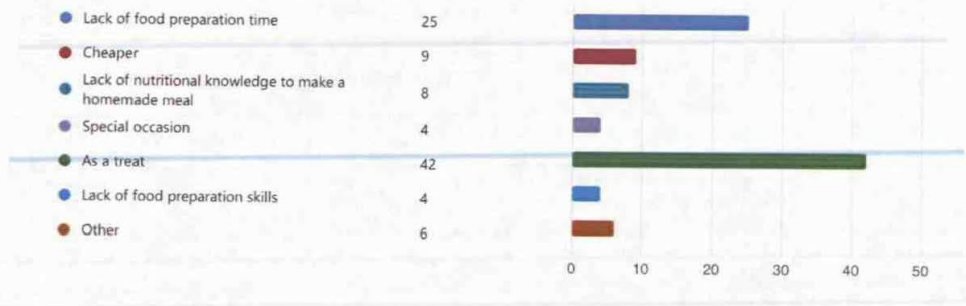
Investigation 1 Results: Questionnaire

1. How often do you consume a takeaway?

| | |
|-----------|----|
| ● Daily | 11 |
| ● Weekly | 45 |
| ● Monthly | 34 |
| ● Yearly | 6 |
| ● Never | 2 |

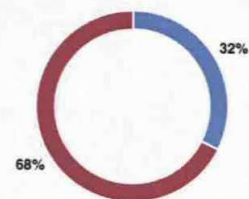


2. What is the main reason for having a takeaway?



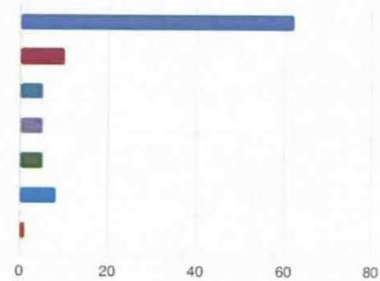
3. Do you view takeaways as a cheaper option than a home made meal?

| | |
|-------|----|
| ● Yes | 31 |
| ● No | 65 |



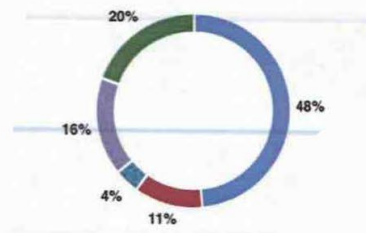
4. What type of media influences your food choice?

| | |
|----------------|----|
| ● Social media | 62 |
| ● Adverts | 10 |
| ● Billboards | 5 |
| ● Newspaper | 5 |
| ● Radio | 5 |
| ● Television | 8 |
| ● Posters | 1 |



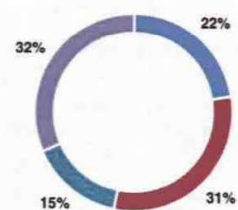
5. How does fast foods make you feel?

| | |
|-------------|----|
| ● Happy | 47 |
| ● Sad | 11 |
| ● Angry | 4 |
| ● Excited | 16 |
| ● Satisfied | 19 |



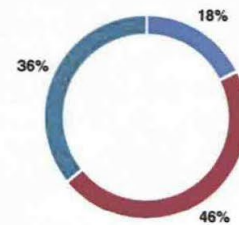
6. How do you order your fast foods?

| | |
|------------------------------|----|
| ● In store | 22 |
| ● Phone and collect | 30 |
| ● Phone and get it delivered | 15 |
| ● Through an app | 31 |



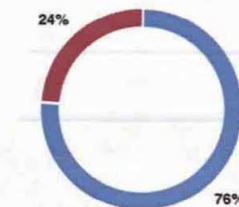
7. Do you exercise after having a takeaway meal?

| | |
|-------------|----|
| ● Yes | 17 |
| ● No | 45 |
| ● Sometimes | 35 |



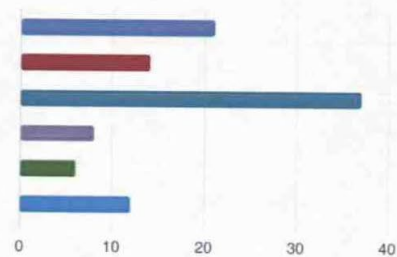
8. Do you think that takeaways are become more normalised. e.g. are more people are buying them?

| | |
|-------|----|
| ● Yes | 73 |
| ● No | 23 |



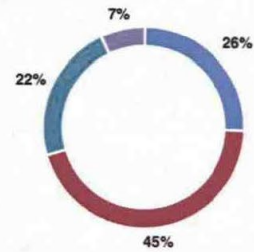
9. what are your reasons for ordering fast foods through an app?

| | |
|--------------------------------|----|
| ● Lack of time | 21 |
| ● Social anxiety | 14 |
| ● You can see what's available | 37 |
| ● Feel forced to | 8 |
| ● Dont order through apps | 6 |
| ● Other | 12 |



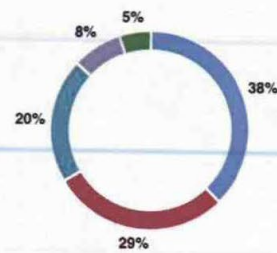
10. How likely are you to try a new fast food if you see it trending on social media?

| | |
|---------------|----|
| Very likely | 25 |
| likely | 44 |
| unlikely | 22 |
| Very unlikely | 7 |



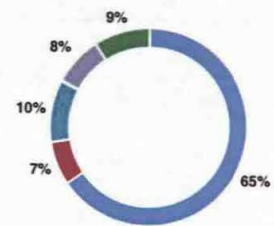
11. How often do you see fast food advertisement on social media?

| | |
|---------|----|
| Daily | 37 |
| Weekly | 28 |
| Monthly | 20 |
| Never | 8 |
| Other | 5 |



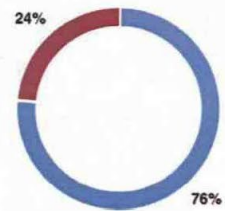
12. Which social media platforms do you most frequently see fast food ads on?

| | |
|-------------|----|
| Instagram | 64 |
| X (Twitter) | 7 |
| Facebook | 10 |
| Snapchat | 8 |
| None | 9 |



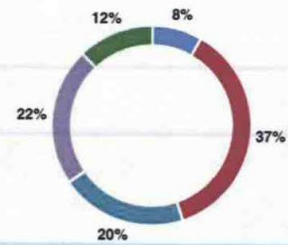
13. Are you aware of the impact of too much sugar on your health?

- Yes 74
- No 23



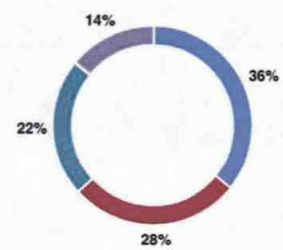
14. How much sugar do you think is the daily recommendation?

- 70g 8
- 35g 36
- 30g 20
- 25g 22
- Other 12

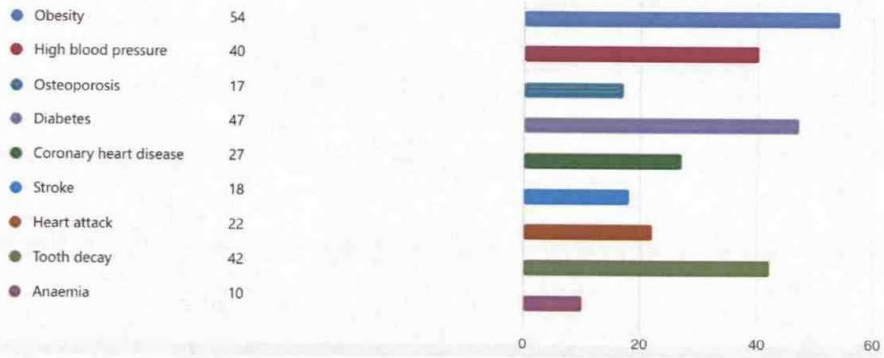


15. How much salt do you think is the daily recommendation?

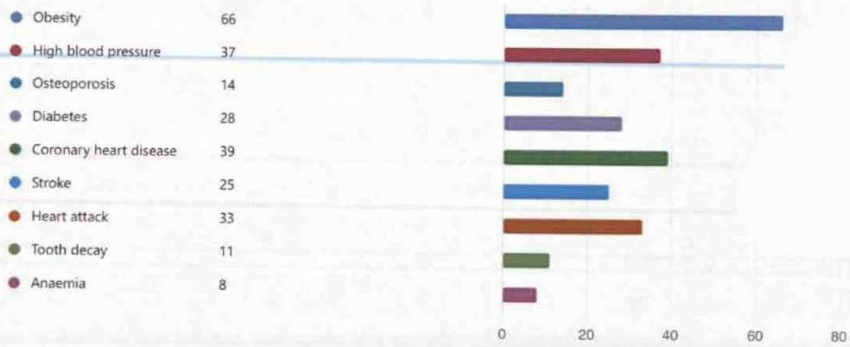
- 6 grams 35
- 4.2 grams 27
- 8 grams 22
- 5 grams 14



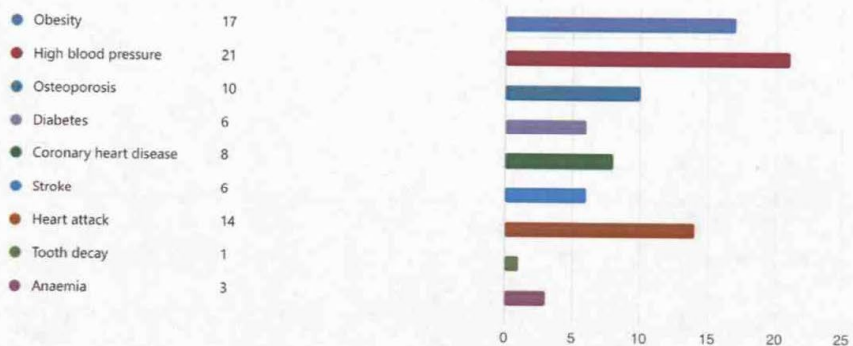
16. What do you think too much sugar leads to?



17. What do you think too much fat leads to?

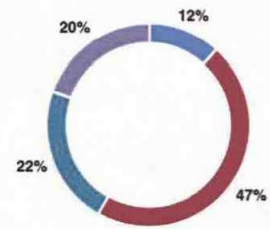


18. What do you think too much salt leads to?



19. How much fat do you think is the daily recommendation?

| | |
|--------------------|----|
| ● No more than 40% | 10 |
| ● No more than 35% | 40 |
| ● No more than 10% | 19 |
| ● No more than 15% | 17 |



Research technique 2: Interview

Respondent descriptor: _____, Former Dietitian Forth Valley Hospital – current student Strathclyde university: BSc Hons Education & Curricular Studies with Teaching Qualification (Home Economics)

Interviews are an effective research method as they allow for specific questions and in-depth responses. Unlike questionnaires, which provide structured answers, interviews let participants elaborate, offering richer qualitative data.

Typically, interviews include 5-8 detailed questions, balancing depth with manageability. Recording the interviewee's job title provides context for their expertise and perspective.

Interviews are cost-effective and easy to conduct in various formats, including in-person, Zoom, phone, or email. This flexibility benefits both researchers and participants. In this study, the interview was conducted via email, allowing the interviewee time to consider their answers, despite face-to-face options being available.

Interviewees can expand on questions, offering unexpected insights. However, handwritten responses may make capturing details challenging, so audio recordings help preserve information.

This study's interview consisted of 17 open-ended questions on takeaway consumption and its impact. The interviewee was selected for their professional expertise and experience, ensuring the data's validity and reliability.

Investigation 2 Results: Interview

1) Do you think that takeaways are becoming more popular?

Yes, takeaways have definitely become more popular over the past few years.

2) If so, how often do you think the average person consumes a takeaway?

On average I think people consume takeaway meals once to twice a week. This can vary based on lifestyle, but it's a common frequency for many.

3) Why do people consume takeaways?

People have takeaways for a variety of reasons but they definitely enjoy takeaways as a treat, on the weekend, or for a special occasion.

4) What are the primary health risks associated with regular consumption of takeaway foods?

Regular consumption of takeaway foods increases the risk of obesity, heart disease, type 2 diabetes, and high blood pressure due to high levels of unhealthy fats, salt and

sugar. It can also lead to poor digestion, nutrient deficiencies, and a higher risk of chronic inflammation.

5) Are there specific ingredients or additives found in takeaway foods which have a negative impact on health?

Takeaway foods often contain additives that negatively impact health. Many dishes are high in trans fats and saturated fats, which can elevate bad cholesterol and increase heart disease risk. They also tend to be loaded with excess sodium and refined sugars, contributing to high blood pressure, obesity and type 2 diabetes.

6) To what extent do you think that most consumers are aware of the potential health risks of regularly eating takeaway foods?

Many consumers know takeaway foods are unhealthy but may underestimate long term risks like obesity and heart disease, which is why they tend to exceed with their intake. Convenience and marketing often outweigh health concerns, and clearer labelling could improve awareness.

7) How much do you think that marketing and advertising influence consumers food choices when it comes to ordering takeaway foods?

Marketing and advertising heavily influence consumers food choices by making takeaway food seem more appealing, convenient, and desirable. Things such as notifications, promotions and images of the meal can encourage purchasing takeaway meals. Targeted ads, especially on social media. Further reinforce cravings and bad habits, making unhealthy choices more often.

8) Do you think consumers are aware of the daily recommendation for salt?

Many consumers may not be fully aware of the daily salt recommendation. While they may know too much salt is unhealthy, they might not realise how easily they exceed the limit, especially with processed or takeaway foods. Too much salt can lead to high blood pressure and strokes.

9) Do you think consumers are aware of the amount of fats recommended in one meal?

Consumers are often unaware of fat recommendations. The daily limit is about 70g of total fat, with 20g from saturated fats. Takeaway meals often exceed these limits, raising the risk of heart disease.

10) What type of impact on mental health do you think consuming fast food regularly have?

Regular fast foods consumption can increase the risk of depression, anxiety and mood swings due to the unhealthy fats, high sugar and lack of nutrients.

11) How do most people order a takeaway?

Most people order takeaways through mobile apps, online websites or by calling the Restuarant directly. Food delivery apps like uber eats and just eat and especially popular due to their convenience.

12) Why do you think that phone apps are being used to order takeaway foods more often.

People order through apps because they offer convenience and efficiency, apps save time by allowing browsing, easy payments and no need to walk to the shops.

13) Do you think that consumers on a tight budget are more or less likely to consume takeaways?

Consumers on a tight budget are often more likely to consume takeaway foods, as they can appear cheaper and more convenient than cooking at home. However, over time the cost of frequent takeaways can add up, and they may not be the most cost-effective option for long term health problems.

14)What do you think the main reason for people having a takeaway is?

I think the main reason people opt for takeaways is typically convenience. They offer a quick, easy meal option without the need for cooking or preparation, making them appealing for busy individuals or those who prefer not to spend time in the kitchen.

15)Are people aware of the health risks of too much sugar?

I don't think that many people are fully aware that too much sugar can lead to tooth decay, i think the obvious answer is obesity but it impacts your teeth just as much. It allows bacteria to produce acids that erode enamel, causing cavities and potential tooth loss.

16)How do you think regular exercise impacts the frequency or choice of takeaway food in a person's diet?

People often view takeaway meals as a treat or indulgence, which can lead to a more relaxed attitude towards exercise afterwards. Instead of working out, many would prefer to rest or unwind after consuming a takeaway, especially if the meal is heavy or high in calories.

17)Are people aware of the negative impact of too much saturated fats?

I think that the awareness of the health risks of saturated fats varies, it is often exceeded, with many people knowing it can raise LDL cholesterol and increase heart disease.

Analysis

In the literature review, the researcher found that takeaway consumption is becoming more normalised and is happening more frequently. When asked in the questionnaire how often people have a takeaway, 45% of respondents said they have one weekly. This aligns with the interview, where the dietician mentioned that people are generally consuming takeaways once a week, and sometimes even twice a week. Based on this, it can be concluded that many people are eating takeaway meals more often than they should. This trend suggests that individuals are developing an unhealthy eating pattern, with takeaways becoming a regular part of their diet.

In the literature review, the researcher found that some takeaway dishes contain more than twice the recommended daily limit for salt. When asked in the questionnaire if people knew the daily salt recommendation, only 35% were aware that it is 6g. This means that 65% of people don't know how much salt they should be consuming each day. This aligns with the interview, where the dietician mentioned that many people are unaware of the recommended salt intake. Therefore, it is clear that a large number of individuals don't know the recommended daily salt limit, which suggests that many are likely exceeding it regularly, especially through takeaways.

In the literature review, the researcher found that many parents struggle to find the time to prepare a nutritious meal each night, often resorting to takeaways for convenience. In question 2 of the questionnaire, however, only 25% of respondents

said they choose takeaways because of a lack of time. In contrast, the dietician mentioned in question 11 of the interview that the primary reason people order takeaways is convenience, as it provides an easy meal option with no preparation required. This suggests that while time is a factor for some, the main reason for takeaway consumption is convenience, as highlighted by the dietician.

In the literature review, the researcher found that foods from fast food restaurants tend to be more expensive than food bought from a grocery store. However, in question 3 of the questionnaire, 66% of respondents stated that they do not believe fast foods are any cheaper than a homemade meal. In question 10 of the interview, the dietician mentioned that people on a tight budget often opt for takeaway foods because they are cheaper and more convenient. This suggests that individuals on a tight budget are more likely to buy fast foods instead of purchasing ingredients from a grocery store.

In the literature review, the researcher found that people are more likely to buy certain fast foods if they see them advertised on social media. In question 4 of the questionnaire, 63% of respondents stated that social media influences their food choices. This closely links to question 10, which revealed that 69% of respondents are likely to try a fast food item if they see it advertised on social media. In question 11, 37% of respondents reported seeing food advertisements on social media daily, while 28% see them weekly. This relates to question 7 of the interview, where the dietician stated that marketing and advertising make takeaway food seem more appealing and convenient. This suggests that social media advertisements strongly influence food choices. Evidence from both the questionnaire and interview confirms

that ads make fast food appear appealing and convenient, influencing people's decisions to purchase it.

In the literature review, the researcher found that fast foods provide a short lived sense of happiness. The questionnaire findings support this, as question 5 revealed that 68% of respondents feel either happy or excited when having a takeaway. However, the literature review also highlighted that fast foods contribute to poor mental health, including an increased risk of depression and anxiety. This is further supported by the dietician's statement in question 10 of the interview, where they noted that fast foods increase the risk of mood swings, depression, and anxiety due to unhealthy ingredients and a lack of essential nutrients. In conclusion, while fast foods may bring temporary happiness due to their taste, over time, they can contribute to negative thinking and emotional distress.

In the literature review, the researcher found that the use of apps such as Just Eat, Uber Eats, and Deliveroo is becoming more popular, with the number of users continuing to grow. People use these apps for convenience and to easily view all available options. In question 9 of the questionnaire, 37% of respondents stated that they order from takeaway apps because they can see what is available, while 21% order due to a lack of time. This is supported by the interview findings, as in question 13, the dietician stated that the main reason people opt for takeaways is typically convenience. This suggests that the increased use of apps such as Just Eat is driven by consumer demand for convenience. These apps provide accessibility, flexibility,

and a variety of options, allowing users to order from multiple establishments at once.

In the literature review, the researcher found that a diet high in sugar increases the risk of tooth decay. In question 16 of the questionnaire, 43% of respondents indicated that they believe excessive sugar consumption leads to tooth decay. This is supported by the interview findings, as in question 14, the dietician stated that many people are not fully aware of the link between high sugar intake and tooth decay. This suggests that individuals who consume takeaways regularly may have a higher sugar intake, which can contribute to various health issues, including tooth decay. tooth decay becomes severe, it may eventually require extraction.

In the literature review, the researcher found that consumers are generally unaware of the amount of saturated fats in their diet. In question 17 of the questionnaire, 66% of respondents indicated that they are aware that a diet high in fats can lead to obesity. This connects to the interview findings, as in question 6, the dietician stated that people are often unaware of the negative impact of excessive fat consumption and frequently exceed recommended limits. This suggests that when individuals consume takeaways, they may not fully consider the long term negative effects on their health.

In the literature review, the researcher found that people consume takeaways up to three times a week. In question 2 of the interview, the dietician stated that the average person consumes takeaway meals once to twice a week, though this can vary. This aligns with the findings from the questionnaire, where in question 1, 45% of

respondents indicated that they consume takeaways weekly. In conclusion, it is clear that people consume takeaways between once and three times per week, suggesting that takeaways have become a regular part of their routine.

In the literature review, the researcher found that 42% of people consider having a takeaway as a treat. This aligns with question 2 of the questionnaire, where 42% of respondents stated that their main reason for having a takeaway is as a treat. This is further supported by the interview findings, as in question 3, the dietician mentioned that people often enjoy a takeaway at the weekend or for a special occasion. In conclusion, takeaways are primarily consumed for specific occasions rather than out of habit. Both the interview and questionnaire findings support this, reinforcing the accuracy of the conclusion.

In the literature review, the researcher found that phone apps are a more popular method of ordering fast food due to their speed and convenience. In question 6 of the questionnaire, 31% of respondents stated that they order fast food through an app. This is supported by the interview findings, as in question 12, the dietician noted that most people order takeaways through mobile apps such as Just Eat and Uber Eats. In conclusion, mobile apps are a popular method for ordering takeaways, as they provide a convenient and time efficient option for consumers.

In the literature review, the researcher found that it is not common for people to exercise before or after a meal. However, a diet high in takeaways should ideally include regular exercise to burn off excess energy. In question 7 of the questionnaire, only 17% of respondents stated that they exercise after having a takeaway meal, meaning the majority do not. This aligns with the interview findings,

as in question 17, the dietician noted that people are usually too relaxed after a takeaway meal to engage in physical activity. In conclusion, individuals who consume takeaway meals are unlikely to exercise afterward. Given that takeaway meals are often high in calories, unhealthy fats, and sugars, a lack of exercise can lead to excess energy being stored as fat, increasing the risk of obesity.

In the literature review, the researcher found that people's food choices are influenced by what they see online. In the questionnaire, Instagram was identified as the main platform influencing fast food choices, with 64% of respondents stating this. This aligns with the interview findings, where the dietician noted that images posted online make people more likely to try fast food. In conclusion, online content significantly impacts food choices, often promoting unhealthy options.

In the literature review, the researcher found that adults should consume no more than 30g of free sugars per day but could exceed this limit with just one meal from a Chinese takeaway. In question 13 of the questionnaire, 74% of respondents stated that they are aware of the impact of excessive sugar on their health. However, in question 14, only 36% knew that the daily recommended sugar intake is 30g. This indicates that while many people recognise the health risks of too much sugar, they are largely unaware of the specific daily limit they should adhere to

In the literature review, the researcher found that excessive salt intake can lead to high blood pressure and an increased risk of strokes. This aligns with the interview findings, as in question 8, the dietician stated that a diet high in salt can raise blood pressure and contribute to strokes. The dietician also noted that consumers are not

fully aware of the recommended salt intake. This is supported by the questionnaire results, where only 21% of respondents identified high blood pressure as a consequence of excessive salt intake, and just 6% recognised its link to strokes. In conclusion, a lack of awareness about the effects of salt on health increases the risk of these serious conditions.

In the literature review, the researcher found that a McDonald's Double Quarter Pounder contains 20g of saturated fat. In question 9 of the interview, the dietician stated that the daily limit for saturated fat intake is also 20g. This means that consuming just one Double Quarter Pounder puts an individual at a high risk of exceeding the recommended daily limit. In question 19 of the questionnaire, 40% of respondents believed the daily fat intake recommendation was no more than 35%, indicating a lack of accurate knowledge. In conclusion, 60% of people are unaware of the correct daily fat intake limit, increasing the likelihood of exceeding it, which can contribute to obesity.

Evaluation

Overall, the research process was successful, but there are several aspects the researcher would change if they were to conduct it again.

The researcher might have benefited from focusing the interview questions on the findings from the literature, as they found it challenging to connect some of the points. In the future, they should ensure the questions are more directly related to the literature review to establish clearer connections. To facilitate result comparisons, the researcher revised the literature review, adding sections to create smoother links.

The questionnaire was created using Microsoft Forms, allowing for quick collection and sharing of results. It was sent via email to 100 people, including friends, family, and teachers. The simple, user friendly format minimised errors. Although only 98 people responded, this was still a sufficient and reliable sample size for the research.

The researcher struggled to find 100 participants, spending considerable time emailing and following up to ensure questionnaire completion. In the future, they might consider conducting a focus group to obtain quicker responses.

The interview was conducted with Rachel Cockburn, a former dietitian, who answered the researcher's questions via email. This method was convenient, allowing Rachel to provide direct answers without requiring an in person meeting. However, it limited the opportunity for follow up questions or further elaboration, resulting in less detailed information than expected.

An area of further research based on the original objective would be to consider exploring whether alternative convenient meal options (e.g., meal kits, healthier premade meals) can reduce takeaway consumption.

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