

Exploring the prevalence and impact of Food Poverty among University students in the UK through quantitative survey analysis.

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Abstract

Over the past few years' food poverty has become an increasingly pressing issue brought to light by the current 'cost-of-living crises'. While previous studies have addressed food poverty and the effects of rising prices on the UK population as a whole, the specific challenges being faced by students remain relatively unexplored. Understanding the true extent of the problem is critical to develop policies and support systems to alleviate the problems being faced by students. The aim of the study was to understand the prevalence and impacts of food poverty among students in the UK. The objectives of the study were to gain an overall understanding of the severity of food poverty among students, to identify the underlying causes and reasons, to assess the impact of food poverty on students' health and well-being and to understand the impact food poverty has on academic performance. This quantitative study used questionnaires to gather relevant information. The questionnaires were posted online with the target population being students over the age of 18 at university in the United Kingdom. The researcher used a self-selecting sampling method to gain responses from 121 participants. The data was analysed by a researcher using Google Sheets and SPSS was used to carry out Chi-squared tests on the data. The main findings show a significant issue of food poverty among students in the UK and highlight the need for urgent policy changes and support systems to address food poverty in higher education. Many respondents to the questionnaire reported issues including, worrying about running out of food or being unable to afford food, skipping meals due to financial difficulties, putting the price of food above the nutritional value of it and having to choose between buying food or paying for essentials. A small proportion of participants have also reported having to use a food bank in the past 12 months. Additionally, the questionnaire found a lack of awareness of initiatives available to support students and students facing significant negative effects on academic performance as a result of food poverty. The research provides valuable insights into the experiences of food poverty among this often-overlooked demographic. However, more in-depth research is needed to gain a representative understanding of the extent of the problem across the UK. The researcher recommends the government reviews the student loan policy and increases loans in line with rising living costs and universities introduce initiatives to support students and raises awareness of food poverty issues.

Key words: Food poverty, Food insecurity, Students, Public Health, Impacts, cost of living crises, Environmental Health, Mental Health, Physical Health, University.

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1.0 Introduction

Over the last few years food poverty has been subject to increasing academic, political and media attention resulting from the reduction in consumer purchasing power due to the ongoing cost of living crises (O'Connor, Farag and Baines, 2016). Food poverty is complex and multi-faced. It is not simply about hunger but involves dietary choices, the cultural norms and the physical and financial resources that affect which foods are eaten ultimately impacting on health status (Maslen et al., 2013). In simple terms, food poverty can be defined as 'The inability to consume an adequate quality or quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so' (Sustain, 2016). Food poverty in the UK is currently being exacerbated by the ongoing cost of living crises. The 'cost of living crises' is the term used to describe the fall in real disposable income that the UK has experienced since late 2021. The ongoing war in Ukraine has dealt a major shock to commodity markets altering global patterns of trade, production and consumption that have caused historically high price rises. The increase in energy prices over the past few years has been the largest since the 1973 oil crisis. As well as price increases for food and fertilizers have been the largest since 2008 (Webster and Neal, 2022).

This crisis has undeniably had a significant impact for university students across the UK, a demographic group often overlooked in government policies and decision making. Today's students are victims of failed social policy's, mainly stemming from the austerity of 2008/09, but certainly the policies which were to follow, most significantly, the increase in tuition fees, Brexit, COVID-19 and the Russia and Ukraine war (Beck, 2024). A survey of over 6,500 from the National Union of Students has revealed that 75% of students said their loan or bursary does not cover their cost of living comfortably, 42% of students live on less than £100 a month and 45% of students live on less than £50 a month. As well as this 14% of students have used foodbanks in the 2023/24 academic year and 13% have experienced homelessness (National Union of Students, 2024).

Food poverty remains relatively hidden, especially in high income countries where there is a perception that it is not a big problem, however the impacts of food poverty in these countries are vast (BMC Medicine, 2023). A survey conducted by University College London, Kings London and Natcen which involved a nationally representative sample of low income households found that people on lower incomes are more likely to have lower than recommended consumption of fruits and vegetables, higher then recommended consumption of sugar and saturated fatty acids, low intakes of dietary fibre, low intakes of iron, folate and vitamin D and higher prevalence of overweight and obesity (Maslen et al., 2013). Physical health problems can prevent students from attending courses therefore

adversely affecting their academic performance and their social integration into university life. Poor physical health is strongly associated with dropout rates and are correlated with lower success probability (Baalmann, 2023). Furthermore, career prospects are seen as lower for those with long-term or chronic illnesses. Those experiencing food poverty are also at an increased risk of mental health disorders, heart disease and chronic pain (BMC Medicine, 2023). Food poverty clearly presents a considerable threat to students' mental health and well-being and these common mental health difficulties such as depression and anxiety have educational and social consequences including academic underperformance and increased risk of dropping out of university (Campbell et al., 2022). Food poverty puts a major strain on Public Health Services and research has revealed that those experiencing food poverty are more likely to be admitted to hospital for acute care, stay in hospital for longer and are more likely to be readmitted (BMC Medicine, 2023).

This dissertation study concerns both Environmental and Public Health. The researcher has chosen to examine the prevalence and impacts of food poverty among students at universities across the UK. There is a significant lack of previous research carried out on this topic in the UK, with most previous research taking place in the USA. The majority of studies found by the researcher were systematic reviews, for this reason the researcher has chosen to carry out a quantitative approach to this study. The researcher used gaps in previous literature to broaden this research project.

1.2 Personal Statement

Food poverty is a topic that has always interested the researcher. Prior to starting university, the researcher had spent time volunteering in deprived areas of Africa providing aid and food supplies to communities living in areas where food poverty issues are rife. Witnessing first-hand the harsh realities of food poverty shaped the researchers' understanding of social inequality and the urgent need for action. After starting university in the UK, the researcher discovered that these significant issues were also present in the UK, in different forms to what was seen across the world. The researcher was exposed to significant issues of food poverty among peers whilst at university and at times themselves struggled with the pressure of relying on student finance during the cost-of-living crises.

1.3 Aims and Objectives.

The aim of this study was to understand the prevalence and impacts of food poverty among students in the UK.

The objectives of the study are as follows;

- To gain an overall understanding of the severity of the issue of food poverty among students.
- To identify the underlying causes and reasons behind food insecurity among students.
- To assess the impact of food poverty on students' health and well-being.
- To understand the impact food poverty has on academic performance at university.

1.4 Structure

Chapter two of this dissertation will provide an in-depth literature review where previous articles and studies will be analysed as well as introducing the reader to the topic of food poverty, with an emphasis on how it affects students. This chapter will cover definitions of food poverty, who is most at risk, the cost-of-living crises, who is most affected by the crises, government policies and finally the findings of previous studies.

Chapter three describes the methodology used for this study. This chapter will discuss the research design, the questionnaire design, the sampling and recruitment process, how the data will be analysed and the validity and reliability of the data collected.

Chapter four will display the results and findings from this research study. The results are displayed in the form of bar charts and pie charts with a short description of each graph

Chapter five is a detailed discussion of the main findings of the study. This chapter describes the implications of the findings for Public and Enviornmental Health, how the results relate to the research question and how the results relate to the findings of previous studies. Chapter five will also present the researchers' conclusion and recommendations gathered from carrying out the study.

2.0 Literature Review

This chapter will define food poverty and discuss how students are a particularly vulnerable population. This chapter will also discuss how the cost-of-living crisis has exacerbated the problem of food poverty, legislative initiatives aimed at addressing food poverty, what universities have done to combat food poverty among students, and previous study's which have researched food poverty among students. This literature review will go over the procedures used to search for literature in order to ensure that the most relevant and up-to-date material was used in the study.

2.1 Literature Search

In order to analyse the most up to date and relevant literature on students' experiences of food poverty, information was gathered from several sources. Sources were primarily established through the Liverpool John Moore's University (LJMU) Library database using the 'discover' feature. The 'discover' feature searches across a wide range of databases such as PsychInfo PubMed and Cinahl and produces results with the most relevance to the topic of food poverty. The main keywords and phrases which were used to search for literature included; "Students", "Food Poverty" "Food Insecurity", University Students OR higher education In the UK " "Students in the UK and Food Poverty" "Student Hunger UK" "Student Financial Hardship" "Nutritional Challenges for UK Students" "Impact of Food Poverty on academic performance". The advanced search feature of the LJMU discover tool was also utilised during the research. Search terms were combined using "AND" to narrow the search, for example "Food Poverty AND Students". In order to widen the search "OR" was used, for example "Impacts OR effects" and "NOT" was used to exclude words which did not have relevance to the study, for example, "Food poverty among University Students NOT secondary school". This was useful as a number of studies focused on food poverty among secondary school pupils, which was not relevant to this study. Brackets were also used to group search terms together and quotation marks were used when searching for phrases of two or more words.

The data was filtered to only include publication produced since 2015. This produced literature, which was up to date, giving the best results as it is more likely to give a better representation of the problem today, during the cost-of-living crises. The results were also limited to only include peer reviewed journals to ensure the highest level of academic standards and reliability of the data collected. Where internet search engines such as google scholar were used the researcher was careful to ensure accuracy and reliability of the sources used, favoring government or peer-reviewed websites and articles. Individual databases were also used when searching for literature, these included BMJ journals, sage journals, emerald insight and annual reviews.

Where it was possible the results were limited to UK only data, however there is a significant lack of relevant literature which addresses the issue of food poverty among students in the UK, so at times the search was widened to include America, Australia and Canada. These are highly developed countries with education systems similar to the UK and so therefore there is value in using this literature. Due to the scarcity of studies carried out in the UK on food poverty in higher education the researcher was satisfied she had identified a gap in research.

2.2 What is food poverty and who is at risk?

In order to understand the meaning of food poverty it is first crucial to fully comprehend the meaning of 'food insecurity.' The term 'food insecurity' originated from discussions around hunger and absolute deprivation in the developing world and has been around longer than the more recent concept of 'food poverty' (Healy, 2019). The World Food Summit of 1996 defined food security as 'existing when all people, at all times, have physical social and economic access to sufficient, safe and nutritious food to meet dietary needs for a productive and healthy life' (United Nations, 2015). Despite some scholars using the terms 'food insecurity' and 'food poverty' interchangeably, other academics have characterised food poverty as being distinctly different. There is currently a lack of consensus globally on standardised Food Poverty terminology and misunderstanding of the key terminology makes it difficult to properly identify the problem and take appropriate action to alleviate it. Dowler utilises a commonly agreed definition of food poverty as; 'The inability to consume an adequate quality or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so' (Sustain, 2016). Dowler's definition links food poverty with income (absolute poverty) but also to cultural norms (relative poverty) (Healy, 2019). O'Connor et al., (2016) adopt a similar definition, defining food poverty as 'the insufficient economic access to an adequate quantity and quality of food to maintain a nutritionally satisfactory and socially acceptable diet.' This definition accepts that food poverty is not only about having enough food, but also about eating a diet that is acceptable in the culture and being socially included in customary activities (Healy, 2019). Researchers have clearly linked food poverty not only to hunger and deprivation but also to nutritional adequacy, cultural norms and social exclusion.

In comparison, Lang defines food poverty more simply as 'Food poverty is worse diet, worse access, worse health, higher percentage of income on food and less choice from a restricted range of foods. Above all food poverty is about less or almost no consumption of fruit & vegetables.' (lang, cited in Food Exeter, n.d.). Despite this definition comprising several important aspects of food poverty it is slightly oversimplified, reducing food poverty to specific indicators and overlooking broader systematic issues such as socioeconomic

inequality, food system failures and cultural factors that may influence food choice. The Department of Health define food poverty as 'The inability to afford, or to have access to, food to make up a healthy diet.' (Food Exeter, n.d.). This definition simplifies food poverty to being either able or unable to afford healthy food, neglecting the dynamic nature of the issue of food poverty, where individuals may experience changes in their ability to access and afford a healthy diet over time. Establishing a definition of food poverty which is used and accepted globally is essential in order to properly measure changes and statistics relating to food poverty (Healy, 2019). For the purpose of this research study the definition which will be used is 'The inability to consume an adequate quality or sufficient quantity of

food in socially acceptable ways, or the uncertainty that one will be able to do so' (Sustain, 2016).

2.3 Cost of living crisis

Currently, the UK along with other highly developed countries, is facing a substantial increase in living costs (Broadbent et al., 2023). The cost-of-living crisis can be defined as a 'fall in real disposable incomes, where the price of everyday essentials like groceries and bills are rising faster than average household incomes.' The UK suffered considerably during the pandemic and the economy took many hits. Following this in 2022 the UK's economy was hit again, it faced unprecedented price rises on gas and fuel as Russia dramatically reduced sales to Europe (Williams and Dienes, 2022). Soaring inflation on household essentials, energy price increases, falling wages, rising rent costs, asset inflation, growing intergenerational wealth inequality, precarious employment, cuts to public services, enclosure of commons and natural resources, departure from the EU and the privatisation and deregulation of a fossil-fuel reliant energy market have thrown many families into economic turmoil since 2022 (Singh and Uthayakumar-Cumarasamy, 2022).

2.4 Who is affected by the cost-of-living crises?

The cost-of-living crisis is not affecting everyone in the same way, and some population groups are experiencing its impacts much more severely. Those living in deprived areas or on lower incomes, older adults, families with dependent children, particularly single parent families, those from black and Asian minority communities and those with disabilities are particularly likely to have reduced their gas and electricity expenditure, struggle to pay basic expenditures and be at risk of fuel poverty. Research has found an association between recession and lifestyle related factors such as poor diet, particularly for those with lower socioeconomic status (Williams and Dienes, 2022). The 'heat or eat' dilemma has become an everyday reality for many families living on the knife edge of

poverty and evidence shows that 2.6million children in the UK report having smaller meals or regularly skipping meals altogether (Singh and Uthayakumar-Cumarasamy, 2022).

Students are a group that is often overlooked in society and policy making; since 2021 students attending universities in the UK have struggled with rising prices linked to the cost-of-living crisis. During 2022-2023 academic year the Office of National Statistics conducted interviews with students from universities across England and found that price rises across food, transport, accommodation and utilities had all put pressure on students' finances (Pulman et al., 2024). A survey of 8,800 students carried out by Russell Group Student's Union found that 1 in 4 students regularly go without food and other necessities because they are unable to afford them. The survey also found that students are living on an average of just £2 per week above the destitution line in the UK. The UK government has failed to increase student maintenance loans in line with rising living costs, leaving many students struggling to afford essentials, including food. Over half of respondents to the survey reported that their academic performance has suffered as a result of the cost-of-living crisis (Russel Group, 2023).

2.5 Government Food Security Policies

Since 1976 the UK government has been required under the International Covenant on Economic, Social and Cultural Rights (Article 11) to ensure the human right to adequate food for everyone in the UK (British Dietetic Association, n.d.). The UK government has implemented several policies over the past decade which are aimed at ensuring everyone is able to access adequate food. In April 2023 the benefits and benefit cap were increased in line with inflation and cost of living payments were extended to help those on the lowest incomes cope with rising prices. Although this provides relief to some families it unfortunately does not tackle the fundamental issue of the basic benefit rate not covering the costs of living. The government funded the healthy start scheme which provides pregnant women and families with children under 4, who receive qualifying benefit, with vouchers each week to buy nutritious food including fruit, vegetables, vitamins and cow's milk. This scheme is highly important and supports children who need it the most in their early development years, however it creates a gap between children ages 0-4 entitled to vouchers by the healthy start scheme and when the child starts preschool and can receive free school meals. As a result, over 250,000 children under 5 who face food poverty are missing out on vital support. Free school meals are provided to children in schools if their family receives a qualifying benefit and has an annual household income under £7400, meaning that 1 in 3 children who live in poverty are not eligible for the scheme, parents also currently have to enroll their child in the scheme contributing to around 11% of eligible children not receiving the benefit (Local Government Association, 2023).

Food banks provide emergency food and practical support to people who have been left without enough money to live on and may be the most vital support system provided to families who need it the most. Food banks are run by the local community, for the local community. They rely on volunteers and donations to run the food bank (Trussell Trust, 2024). Between April 2023 and March 2024, the number of people who used a food bank for the first time was 655,000, reflecting historically high levels of food bank need and there is calls for political leaders to urgently set out how they will build a future where no needs a food bank to survive (Trussell Trust, 2024). It's likely that the scale of poverty is much worse than those who use food banks, The Food Foundation in 2017 estimated that in 2014, 17 times more people were food insecure than were visiting the Trussell Trust. The UN Food and Agriculture Organisation's (FAO) Food Insecurity Experience Scale (FIES) estimates that 2.4 million people are experiencing "severe" food insecurity, defined as occasionally going a whole day without eating (British Dietetic Association, n.d.). If food poverty is defined simply in terms of hunger and deprivation then the appropriate response is to give people more food, a role currently being filled, to a certain extent through food banks supported by charities, however food poverty is linked more broadly to human rights, social justice and social exclusion, and the appropriate policy response is much broader and rests on the government (Healy, 2019).

In the past few years, the UK government has taken several controversial measures which many people see as undermining people's right to food. These actions include cuts to the benefit system and changes in who is entitled, reducing the number of families entitled to free school meals, a cutback in funding for local authorities resulting in cuts to services such as meals on wheels as well as inconsistent support for the production and distribution of reasonably priced, healthy fruit and vegetables (Sustain, 2024).

Students are increasingly overlooked by government policy and students are facing a stark reality where maintenance loans have failed to keep up with rising living costs. Many students feel ashamed about using food banks due to the stigma associated with using them, leaving many students to suffer in silence. The ultimate consequence is a food poverty crisis among students who are unsupported and facing financial insecurity. As costs continue to rise it is vital for policy makers to recognise this overlooked demographic, addressing their needs and ensuring education remains accessible for all.

The UK food poverty rate is currently one of the highest in Europe, with 9.77 million adults experiencing food poverty in September 2022 (Local Government Association, 2023). There is a desperate call from the public and third sector organisations for action on policy change by the UK government.

2.6 What universities have done?

A report from the Higher Education Policy Institute revealed that universities have implemented various strategies to assist students amid the ongoing cost of living crisis, including, hardship funds, food and drink discounts, and support with health such as sanitary products. The report found that the University of Manchester sent £170 cost of living payments to more than 90% of students by setting up enquiry forms which handled more than 16,000 queries. Buckinghamshire New University offers a programme to provide free activities to its students, saving students up to £200 a month. Universities are now being forced to take steps which would have been unthinkable years ago, and more than a quarter of universities (27%) now have a food bank. Dr Simon Merrywest Director for Student Experience at University of Manchester and author of the Foreword of the report says, 'This report raises important questions about whether universities should themselves be the ones to plug growing gaps in student finance' (University of Manchester, 2023).

In response to the rising cost of living, Russel Group Universities are enhancing support for students by investing tens of millions in additional hardship funding and offering various forms of financial assistance including subsidised food and extended access to campus facilities. However, additional government support is urgently needed to alleviate students' financial pressures. The Russel Group and its students' unions are urging the government to raise student maintenance loans in line with inflation, consider reinstating maintenance grants for disadvantaged students and review the parental income threshold for maximum loan support which has remained the same since 2008 despite rising average earnings (Russel Group, 2023).

The support from universities does not address systematic issues in student finance, the support also focuses on short-term aid and does not create sustainable solutions for future financial stability among students. The need for food banks in universities across the UK further reflects a frightening trend and suggests failure to address the root causes of food poverty and reliance on them suggests students are struggling to meet their own basic needs, something which should not be normalised within higher education. As well as this, while a small number of universities are stepping up, they represent just a small proportion of the wider university sector. Many institutions, in particular smaller ones with fewer resources, may be unable to implement such policies, leaving their students disadvantaged compared to those at other universities.

2.7 Previous Studies.

There is a significant lack of studies conducted in the UK on the topic of food poverty among students and the researcher aims to plug this critical gap in existing literature. In countries including Australia and America studies have been carried out to investigate the

topic, and these studies are relevant as Australia and America have educational systems and economies similar to those of the UK.

In Australia a systematic review was conducted to investigate whether food poverty is associated with poor academic engagement and wellbeing in Australian students. A total of 6,283 potential studies were established through the search and 41 were deemed to be relevant. 27 of the 41 studies revealed a negative relationship between poverty and wellbeing and engagement within Australian universities (Brownfield et al., 2020). Another study conducted in Australia used online surveys to examine food poverty at the university of Tasmania in March 2020. There were 1,828 respondents to the survey which revealed a total of 38% of respondents were experiencing food poverty. This survey highlights the prevalence of food poverty among university students reflecting broader societal trends and issues and indicating the need for targeted interventions to address food poverty within the context of University students (Murray et al., 2021).

In America, (Owens et al., 2020) carried out a survey involving 502 Texas University students. Food secruity in the last 30 days was assessed using the validated 2-item Food Sufficiency Screener and 6-item USDA Food Secruity Survey Module. Overall, 65.5% of respondents failed to pass the 2-item Food Sufficiency Screener and were at risk for food insecurity. Among these students, low (30.8%) and very low (21.9%) food security was highly prevalent according to the 6-item USDA FSSM (Owens et al., 2020). A systematic review led by researchers in the United States aimed to investigate the prevalence of food insecurity among students, assess the quality of existing studies and explore how various study characteristics relate to food insecurity estimates. The researchers searched four databases using specific keywords related to food insecurity and college students. Ultimately 66 studies were identified. Food insecurity estimates ranged from 10% to 75% in all studies and the overall weighted estimate of food insecurity across studies was 41%. 37 studies further classified students as having low or very low food secruity showing that there is a high prevalence of students facing food insecurity (Nikolaus et al., 2019).

A cost-of-living survey carried out by Kent University in the UK found that 49% of students at Kent University had faced food poverty in the past month (University of Kent, 2024). As well as this more than two-thirds of students feel their mental health has been affected by the recent cost-of-living crisis. The relationship between food poverty and mental health is deeply intertwined acting as both a cause and effect of each other. Researchers from the University of Liverpool have identified food poverty as an independent contributor to poor mental health, irrespective of socioeconomic disadvantages or underlying financial instability. These findings suggest that policies aimed at alleviating food insecurity could also improve the mental health of the population (Narvaez and Goudie, 2024).

3.0 Methodology

3.1 Introduction.

The following chapter will discuss the research design and methods used by the researcher in the study. It will provide a detailed discussion of the data collection methods, the sampling and recruitment process, validity and reliability of the research as well as any potential limitations to the study. The chapter will identify how the questionnaire was designed and the advantages and disadvantages of the chosen methods, how the data collected was analysed, additionally, highlighting ethical considerations. The purpose of conducting this study was to assess the prevalence and impacts of food poverty among university students in the UK.

3.2 Research design.

In order to decide which methodological approach was most suitable to answer the research question the researcher reviewed a variety of methodologies, examining literature on potential research methods as well as reviewing the methods used in previous studies discussed in the literature review. Establishing a clear research question and defined objectives for the research also helped to determine the most suitable methodology. A quantitative research design was chosen to investigate the prevalence and impact of food poverty on UK students, as the researcher deemed it the most appropriate approach. Given the sensitive nature of food poverty, the researcher determined that an anonymous online questionnaire would be the most suitable method for data collection.

Quantitative research aims to collect data through measurement and once the data has been collected the researcher can analyse it to identify patterns and relationships between different variables (Watson, 2015). As Newling (2010, p.34) declares quantitative research is beneficial for addressing focused questions concerning correlations or cause-effect relationships between different variables and the prevalence of different factors within a population. For this study, quantitative research will allow the researcher to gather numerical data that can measure the extent of food poverty among students, as well as identifying patterns, for example the researcher can look for correlations between food poverty factors such as areas of the UK, living situation and financial help the student receives. However, limitations of quantitative research are that it may not capture the context and subjective experiences of individuals, and it may not allow for the exploration of new ideas or unexpected findings (Alshrief, 2023).

Questionnaires are a specific instrument for gathering information. As stated by Staples (1991) questionnaires are standardized lists of questions, the order and wording of which have been carefully considered. They are usually designed to be self-administered by

respondents, either alone or with an interviewer present. According to Denscombe (2010, pp.169–170) questionnaires can produce a considerable amount of data at relatively low costs and supply standardized answers as all respondents are posed with exactly the same questions with no room for variation meaning that data collected is not influenced by variations in wording of questions or the way in which the question is presented, which may be a problem, in for example, semi-structured interviews.

Due to the 9-month time limit for the researcher to conduct the study, the questionnaire was carried out online. Ball (2019) states questionnaires are quick to carry out, they can be rapidly developed and completed by respondents, particularly when shared through social media. Online questionnaires are of high accuracy as the responses are automated and can be easily imported to analytical software packages to be analysed, reducing risk of human error (Callegaro, Manfreda and Vehovar, 2015). Food poverty is a sensitive topic, meaning careful consideration was needed to choose a method which would receive a high response rate. Bowling (2005) mentions that online questionnaires increase willingness of participants to disclose sensitive information, making this method more suitable than, for example, focus groups which create issues of participants safety when discussing sensitive matters (Jordan et al., 2007). According to Ponto (2010) online questionnaires have the potential for bias. However, during this study the researcher took all possible precautions to ensure the study was not influenced by bias, these precautions will be identified later in the chapter.

3.3 Questionnaire design

It was important to identify all relevant data that was required from the participant prior to designing the questionnaire highlighting the main areas of interest of the study and avoiding collection of unnecessary data. To ensure the respondents identity remained anonymous the questionnaire was specifically designed to avoid including questions which may require respondents to disclose any identifiable data. A survey carried out in the UK found that military personnel were more likely to report PTSD when completing anonymous questionnaires compared to identifiable questionnaires (Fear et al., 2012). Highlighting that people are more likely to disclose sensitive information when anonymity is assured.

The questionnaire consisted of 26 questions which were mainly closed-ended where participants were given a pre-determined list of answer options to choose from. According to Denscombe (2010, pp.181) closed ended questions provide the researcher with information that is consistent in length which is easily quantifiable and ideal for making

comparisons. Providing pre-coded data that can be easily analysed. However, closed-ended questions give less scope for respondents to supply answers which reflect the exact facts or true feelings on a topic. Where respondents had the option of selecting 'other' in response to a question, an open-ended follow up question was provided, based on the previous question, giving participants the option to explain their answer in the text box.

The questionnaire was structured into two sections. The first section included general, mainly demographic questions to gather background information about the participants. The second section focused on specific questions related to food poverty. A definition of food poverty was provided at the start of section two to ensure that all participants had a clear understanding of the term and answered the questions using a standardised definition of food poverty. The researcher included a progress bar at the bottom of the questionnaire to allow the respondent to see how many questions were left. According to lan Brace (2018, p.181) progress bars are beneficial as respondents like to see how far along, they are.

To ensure reliability and validity of the questionnaire, the questionnaire was piloted by five people, who included friends and family members. Piloting the questionnaire enabled the researcher to establish how long the questionnaire took to complete, whether the questions were clear and if any questions were insensitive. As well as allowing the researcher to edit any questions that did not make sense before sending out the questionnaire. Williams (2003), points out that it is important to pilot questionnaires to identify any ambiguities in the questions and the range of possible responses for each question ensuring robustness of the data that is collected.

The researcher did not mark any questions as being mandatory on the questionnaire. Respondents could simply move onto the next question if they did not feel comfortable answering a question. The researcher believed that as food poverty is a sensitive topic, marking questions as required may leave the respondent feeling uncomfortable. Respondents may drop out or provide false answers, therefore compromising the data's reliability (Smart Survey, 2023).

3.4 Sampling and Recruitment process

The goal of a sample is to allow the researcher to generalise about a larger population by studying only a small portion of that population (Rea and Parker, 2014, p.4). The target population for this study was UK students. A convenience sample of UK students who were over the age of 18 and self-selected was used for this study. The sample included students at all stages of university, including undergraduate levels 4, 5, 6, postgraduate, MSc and PhD level students. Convenience sampling involves using respondents who are

'convenient' to the researcher and there is no pattern in acquiring these respondents (Edgar and Manz, 2017). According to Etikan et al (2016) convenience sampling is affordable, easy and the subjects are readily available. The questionnaire was posted in student group pages on social platforms including Facebook and Instagram and links to the questionnaire were also posted on the researcher's personal social media accounts to obtain the maximum number of participants and allowing the researcher to access potential participants from all over the UK. To ensure the sample was representative of the population of students in the UK the researcher aimed to achieve over 100 responses. Considering the time constraints and that the research was carried out as part of smallscale undergraduate study the researcher was satisfied the sample size would gather enough valuable data to be anaylsed.

Convenience sampling is subject to multiple forms of bias (Stratton, 2021). As people choose to participate it may only uncover data from a specific group of people who may have strong opinions on the topic so have taken the time to participate on their own accord, known as self-selection bias. The researcher identifies this as being a limitation of the methodology, however, has taken all possible steps to avoid bias including gathering data from as many participants as possible. The data was made available online for a week and snowball sampling was also used as participants passed the questionnaire onto their friends. Using snowball sampling alongside convenience sampling reduced the possibility of bias. Using snowball sampling can increase the overall number of participants as well as allowing the researcher to gain access to hidden groups (Dragan and Isaic-Maniu, 2013). Using snowball sampling as well as posting the questionnaire on online groups ensures that bias is avoided by not just using the researchers' personal networks to gather respondents.

3.5 Data Analysis

The data collected was analyged using Google Sheets. Google Sheets is widely used within research and the researcher considered the programme suitable for analyging the results effectively. The researcher also used SPSS to carry out statistical tests on the data. According to Milovanović and Perišić (2020) SPSS makes analysing data very quick and easy and there is no programming required as well as this many complex statistical tests are available as a built-in feature. The researcher carried out Chi-square tests on the data to explore the relationship between two variables. The chi-square test is useful for analysing differences in categorical variables, especially those that are nominal in nature (Hayes, 2023).

The data collected from the questionnaire was presented in a visual and easy to understand way in the form of graphs, tables, bar charts and pie charts to illustrate the prevalence and impact of food poverty. The researcher believed using these methods to represent data was appropriate for the type of information collected. Representing data in a visual way enables individuals to make sense of the data during exploration tasks (Baker et al., 2009). According to Görg et al (2007) representing data visually also enables individuals to understand large amounts of information and recognise patterns easily as well as easily identifying anomalies.

3.6 Validity and Reliability

Validity is the extent to which a study or test measures what it claims to measure (Gregory, 1992, p.117). In this study validity refers to the extent to which the research accurately measures the prevalence of food poverty among students. Reliability is the degree to which measures are free from error and therefore yield consistent results (Ganesh, 2009). The researcher took various precautions to ensure the research was both as valid and reliable as possible.

One way the researcher ensured validity and reliability was by piloting the questionnaire. The researcher received constructive criticism from the pilot study and altered the questionnaire accordingly. Piloting studies minimises the possibility of respondents misinterpreting questions and therefore improves validity and reliability (Burns et al., 2008). Using self-selecting participants for the study further improved validity and reliability as it minimises the possibility of a sample bias. Sample bias occurs when the researcher selects participants which are not representative of the population (Winship and D. Mare, 1992). As the participants self-include themselves in the study it eliminates the possibility of sample bias. The possibility of interviewer bias is also eliminated through the use of online anonymous questionnaires. Interviewer bias occurs when participants may distort answers to give information, they believe to be more favorable by the researcher (Salazar, 1990). This is particularly a problem when discussing sensitive issues which the respondent may find embarrassing, such as food poverty. Respondents are more likely to disclose truthful information when anonymity is assured.

However, the questionnaire was considerably long, with 26 questions, which may have posed a threat to validity and reliability. Participants may have perceived the questionnaire as too long and provided inaccurate answers just to get the questionnaire done quicker. The researcher tried to overcome this by adding a progress bar to the questionnaire so participants could see how far along they were. As well as this, because the questionnaire was distributed online it was possible for participants to complete the questionnaire more than once, which may have affected the validity and reliability of the data collected.

3.7 Ethical considerations

This project was granted full ethical approval from Liverpool John Moore's University Research Ethics Committee. The researcher took all necessary precautions to ensure the best ethical practice during the project. A participant information sheet was attached at the beginning of the questionnaire, which provided participants with all necessary information about the study before completing the questionnaire. This information sheet was followed by a statement which explained that by completing and returning the questionnaire the respondent is consenting to be a part of the study. There was a 'yes I agree' box under the statement. By ticking the box, completing and submitting the questionnaire consent was implied.

The study was completely anonymous, and no identifiable data was collected, ensuring confidentiality. The questionnaire was submitted through an online website 'Google Forms' which does not retain participants personal data ensuring that the respondents identity remained anonymous, even to the researcher. A significant ethical consideration of the study was that responses could not be withdrawn once they had been submitted due to the anonymity of the responses. This was carefully explained to participants on the participant information sheet.

Food poverty is a sensitive topic which many participants may be affected by. The researcher took the precaution of signposting food poverty support services for any participants who felt they needed support following the completion of the questionnaire. As the topic was sensitive the wording of questions was carefully considered to ensure they did not come across as sensitive or invasive. All data collected was safely stored on an LJMU one drive.

3.8 Limitations

A significant limitation of the study is that the researcher used their own personal networks to gather data, which may have limited the representative of the study. Consequently, the findings may not be applicable to the wider student populations, limiting the researcher's ability to make generalisations (InnovateMR, 2024). As well as this, although the researcher received a reasonable number of 121 responses, more participants would have given the researcher a more representative sample of the whole student population in the UK. A further limitation of the study was that the researcher had significantly limited time to gather and analyse data.

4.0 Results

4.1 Introduction.

This chapter will present the results of the online questionnaire. The results will be shown in the form of bar charts and pie charts created using Google Sheets. Charts comparing the demographics of the participants, including gender, level of study and where in the UK the participant studies with various questions relating to food poverty will be included. The researcher will also undertake a statistical analysis of the results.

The evidence provided in this chapter will support the discussion and conclusions of this research project. The purpose of this study was to assess the prevalence and impacts of food poverty among university students in the UK. This chapter aims to further explore the relationship between students and food poverty and investigate factors which may exacerbate the issue.

Figure 1:

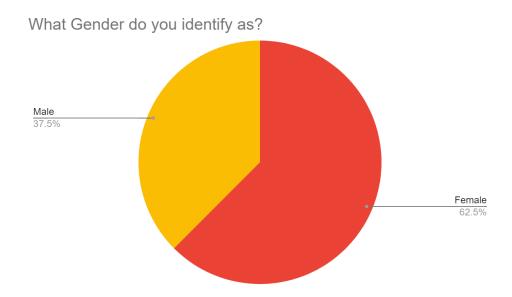


Figure 1 shows the breakdown of participants by gender. 62.5% of participants were female (n=75) and 37.5% of participants were male (n=45). Total number of participants n=120.

Figure 2:



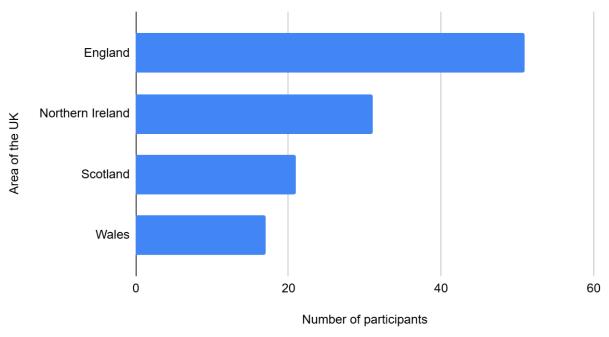


Figure 2 shows the area of the UK in which the participant studies. 42.5% of participants stated they study in the UK (n=51), 25.8% of participants study in Northern Ireland (n=31), 17.5% study in Scotland (n=21) and 14.2% of participants stated they study in Wales (n=17). Total number of respondents n=120.

Figure 3:



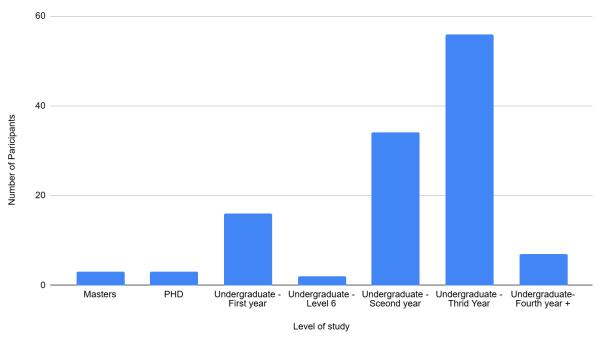


Figure 3 shows the level of study of participants. 2.5% of participants were studying for a masters (n=3) and 2.5% of participants studying for a PHD (n=3). 13.2% of participants were in their first year of their undergraduate degree (n=16) and 28.1% of participants were in their undergraduate second year (n=34). The majority of participants were in their third year of their undergraduate degree, 46.3%, (n=56). Finally, 5.7% of participants were in their fourth year or above of their undergraduate degree (n=7). Total number of participants n=119.

Figure 4:



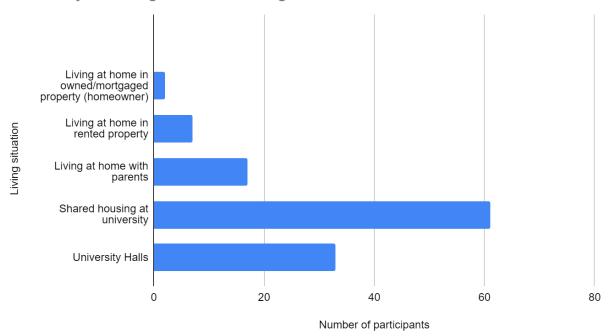


Figure 4 shows the living situation of participants during term time. The majority of participants, 50.8%, stated they live in shared housing at university (n=61) followed by university halls with 27.5% of participants stating they live in university halls (n=33). 14.2% of participants answered they live at home with their parents (n=17) and 5.8% of participants live at home in a rented property (n=7). The least common answer was living at home in an owned/mortgaged property with 1.7% of participants being homeowners. Total number of participants n=120.

Figure 5:



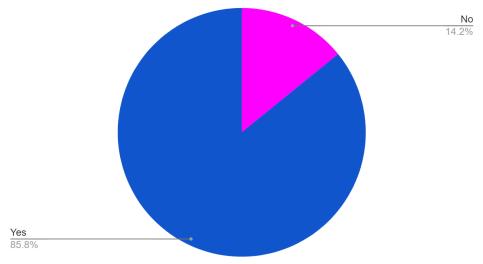


Figure 5 shows that 85.8% of respondents receive a maintenance loan from student (n=105) finance and 14.2% of participants do not receive a maintenance loan (n=17). Total number of respondents n=120.

Figure 6:

Do you work a part-time job during term-time?

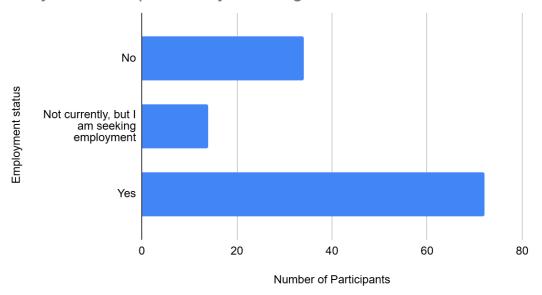


Figure 7 shows the employment status of participants during term time, 60% of respondents answered 'yes' when asked do they work a part time job during term time (n=72). 28.3% of participants responded 'no' they do not work a part time job (n=34) and 11.7% of participants answered that they are not currently but are seeking employment (n=14). Total number of respondents (n=120)

Figure 7:



Figure 7 shows how many hours on average participants work per week. Firstly, 38.7% of participants answered that they do not currently work (n=46). The largest percentage of participants, from those who do work, answered they work between 9 and 16 hours a week, 27.7% of participants (n=33). Following this 14.3% of participants answered that they work up to 8 hours a week (n=17), 6.7% of participants answered they work between 17 and 25 hours a week (n=8) and 3.4% of participants answered that they work 26-30 hours a week (n=4). 9.2% of participants answered that they work 30 hours a week or more on average (n=11). Total number of respondents 119

Figure 8:



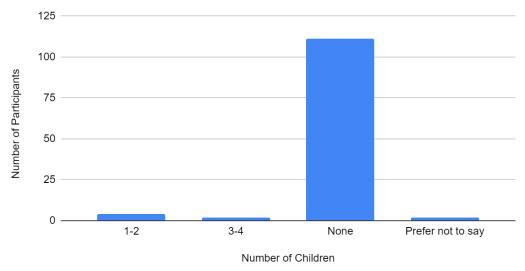
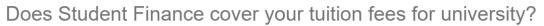


Figure 8 shows the responses to a question which asks how many children you are a parent/guardian to. 93.3% of participants responded 'none' (n=111), 3.4% of respondents responded that they were a parent/guardian to 1-2 children (n=4) and 1.7% of respondents answered they were a parent/guardian to 3-4 kids (n=2). 1.7% of respondents answered, 'prefer not to say' (n=2). Total number of respondents n=119.

Figure 9:



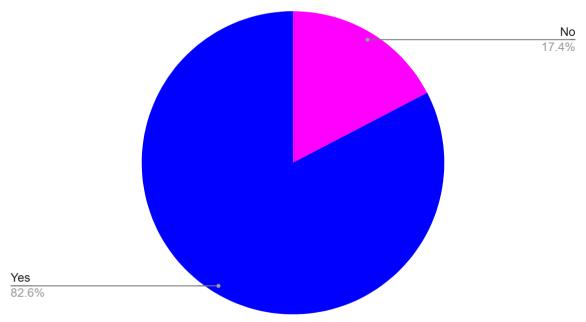
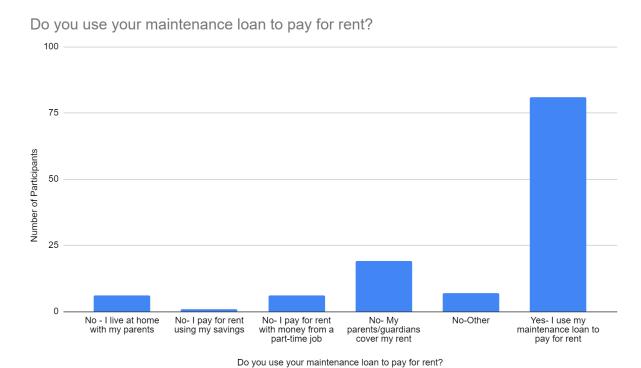


Figure 9 shows that student finance covers the tuition fees for 82.6% of participants (n=100) and 17.4% of participants tuition fees are not covered by student finance (n=21). Total number of respondents n=121.

Figure 10:



When asked do you use your maintenance loan to pay for rent, 67.5% of respondents answered that they use their maintenance loan to pay for rent (n=81). 15.8% of participants answered that their parents pay for their rent (n=19), 5% of participants responded no they live at home with their parents (n=6), 5% of participants answered that they pay for rent with money from a part-time job (n=6) and 0.8% respondents answered that they pay for rent with their own savings (n=1). 5.7% of respondents answered 'other' (n=7), which will be explored further below. Total number of respondents n=120.

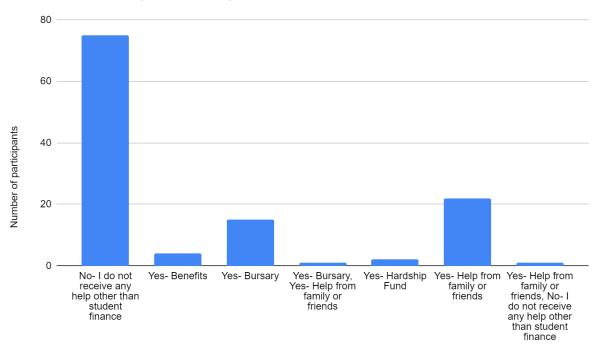
Figure 11:

Other:	
I receive a bursary	
I live at home	
Partner pays bills	
Work full time and pay with wages	
I pay some and parents pay the remaining	
I pay half my rent with my maintenance loan	
I pay part and my parents may the other part	
My maintenance loan doesn't even cover half of my rent, so I use savings to top it up to	
the correct amount.	

Figure 11 shows the responses of participants that answered 'other' for the previous question.

Figure 12:

Other than student finance do you receive any other financial help such as benefits, a bursary or hardship fund?



Other than student finance do you receive any other financial help such as benefits, a bursary or hardship fund?

Figure 12 shows the responses of participants when asked do they receive any financial help other than student finance. 63.6% of respondents answered no they do not receive any financial help other than student finance (n=77). 19.8% of respondents answered that they receive help from friends or family (n=24), 13.2% of participants responded that they receive a bursary (n=16), 13.2% of participants receive benefits (n=4) and 1.7% of participants (n=2) receive a hardship fund. 0.8% of respondents answered 'other' (n=1), this will be explored further in figure 13 below. Total number of respondents n=121.

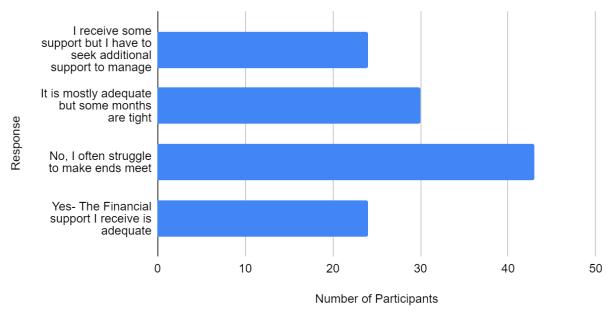
Figure 13:

Other:
I have applied for a bursary but have not yet received it.

Figure 13 shows the response of the participant who answered 'other' to the above question.

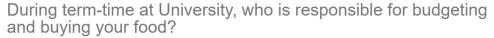
Figure 14:

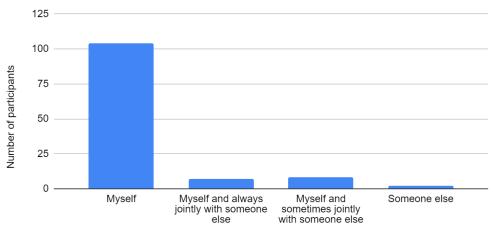




When asked in the participants believe they receive enough financial support from student finance, 35.5% of respondents stated no they often struggle to make ends meet (n=43), 24.8% of respondents answered it is mostly adequate, but some months are tight (n=30), 19.8% of respondents answered I receive some support but I have to seek additional support to manage (n=24) and 19.8% of respondents answered yes the financial support they receive is adequate (n=24). Total number of responses n=121.

Figure 15:





Who is responsible for buying food

When asked who is responsible for budgeting and buying food at university, 86% of respondents answered that they were independently responsible (n=104), 6.6% of respondents answered that they were responsible, but sometimes jointly with someone else (n=8), 5.8% of respondents answered that they were responsible always with someone else (n=7). 1.7% of respondents answered that someone else was responsible for budgeting and buying their food (n=2). Total number of respondents n=121.

Figure 16:

How often do you worry about being unable to afford food or running out of food?

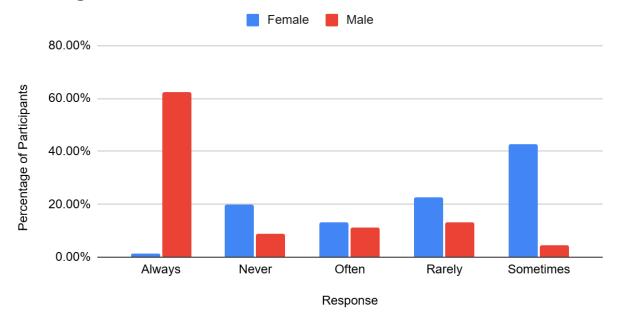
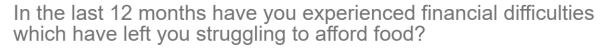
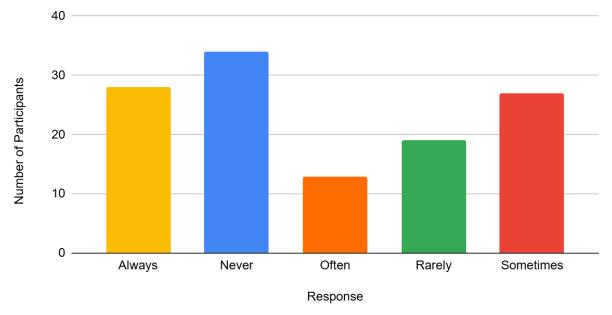


Figure 16 compares the responses of males and females when asked how often they worry about being unable to afford food or running out of food. 62.2% of male participants answered that they always worry about being unable to afford food compared (n=28) with 1.3% of females who answered always (n=1). However, 42,7% of female participants responded that they sometimes worry (n=32) compared with 4.4% of male participants (n=2) and 13.3% of females answered they often worry (n=10) whilst 11.1% of males answered they often worry (n=5). 22.7% of females answered they rarely worry (n=17) and 20% of females responded they never worry (n=15) compared with 13.3% of male respondents answering they rarely worry (n=6) and 8.9% of male respondents stating they never worry (n=4). Total number of Female respondents n=75, total number of male respondents n=45.

Figure 17:





When asked if they have experienced financial difficulties in the past 12 months which have left them struggling to afford food, the majority of participants, 28.1% answered never (n=34), followed by 23.1% of participants who answered always (n=28). 22.3% of participants answered sometimes (n=27), 15.7% of participants answered rarely (n=19) and 10.7% of respondents answered often (n=13). Total number of participants n=121.

Figure 18:

How detrimental do you feel that food poverty could be on a student's academic performance?

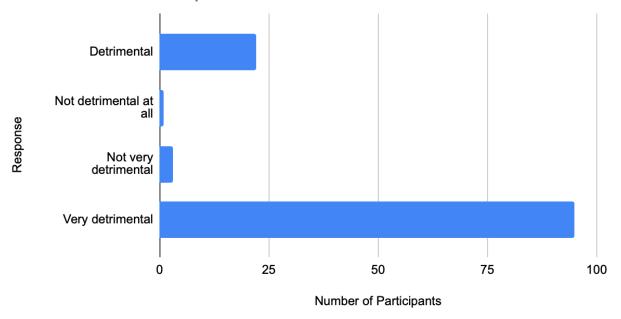


Figure 18 shows that 78.5% of participants believe food poverty is very detrimental to health (n=95) and 18.2% of participants believe food poverty is detrimental to health (n=22). Compared with 2.5% of participants who think it is not very detrimental (n=3) and 0.8% who believe it is not detrimental at all (n=1). Total number of respondents n=121

Figure 19:



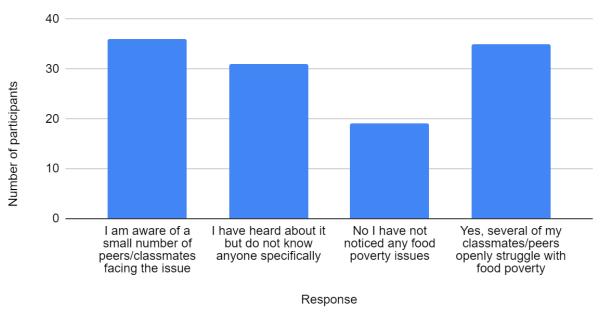


Figure 19 shows participants responses when asked if they are aware of any food poverty issues among their peers/classes. The majority of participants, 29.8%, answered that they are aware of a small number of their peers/classmates who are facing food poverty (n=36). Followed by 28.9% of participants who answered that several of their peers/classmates openly struggle with food poverty (n=35). In comparison 25.6% of participants answered that they have heard about the issue but do not know of anyone specifically who is facing food poverty (n=31) and 15.7% responded that they have not noticed any food poverty issues. Total number of participants n=121.

Figure 20:



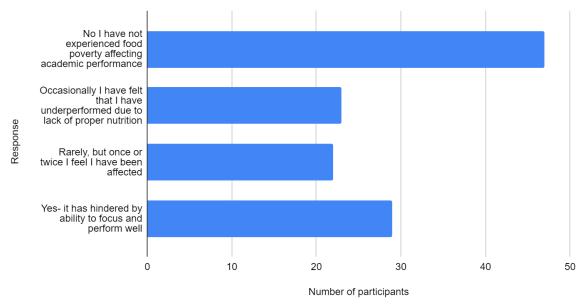


Figure 20 shows participants responses when asked had they ever felt that food poverty had affected their academic performance at university. 38.8% of participants answered no they had not experienced food poverty affecting their academic performance (n=47). 18.2% answered rarely but once or twice they feel food poverty has affected their performance (n=22). Whilst on the other hand, 19% of participants answered that occasionally they felt they had underperformed due to food poverty (n=23) and 24% answered yes it has hindered their ability to focus and perform well (n=29). Total number of participants n=121.

Figure 21:

When choosing food, how often does the price of food come before the nutritional value of it?

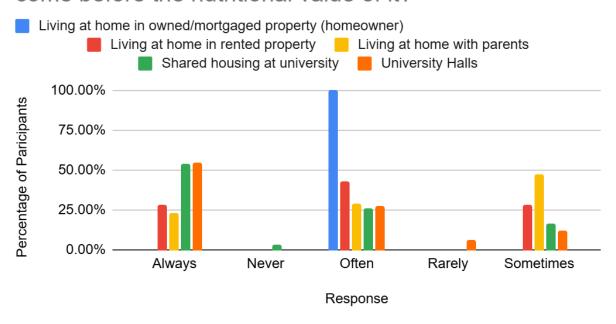


Figure 21 compares students living situation during term time and how often the price of food comes before the nutritional value of it, 54.1% of students who live in shared housing at university answered 'always' (n=33), 26.2% answered often (n=16) and 16.4% answered 'often' (n=10). However, participants living in shared university housing were also the only group to answer 'never', 3.3% (n=2). No one from the group of participants who live in shared university housing answered 'rarely'. From those who live in university halls 54.5% answered 'always' (n=18) as well as 27.3% who answered 'often' (n=9). 12.1% of participants living in university halls answered 'sometimes' (n=4) and 6.1% answered 'rarely' (n=2). No one from the group living in university halls answered 'never'. From the group who answered that they live at home with their parents, 23.5% answered 'always', (n=4), 29.4% answered 'often' (n=5) and 47.7% answered 'sometimes' (n=8). No one from this participant group answered 'rarely' or 'never'. From those who live at home in a rented property 28.6% answered 'always' (n=2), 42.9% answered 'often' (n=3) and 28.6% answered 'sometimes' (n=2). No participant from this group answered 'never' or 'rarely'. Of the group who live at home in their owned/mortgaged house 100% answered 'often' (n=2). Total number of respondents n=121

Figure 22:

Whilst at University, have you ever had to choose between buying food or paying for essentials? (Such as rent or utilities)

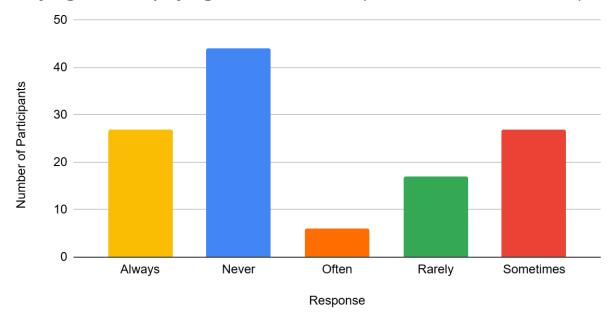


Figure 22 shows participants' responses when asked whether they had ever had to choose between buying food or buying essentials at university. The majority of participants, 36.4% responded 'never' to this question (n=44). 22.3% of participants answered 'always' (n=27), 22.3% of participants answered 'sometimes' (n=27), 14% of participants answered 'rarely' (n=17) and 5% of participants answered 'often' (n=6). Total number of respondents n=121

Figure 23:

Whilst at University, have you ever had to skip a meal because of financial difficulties?

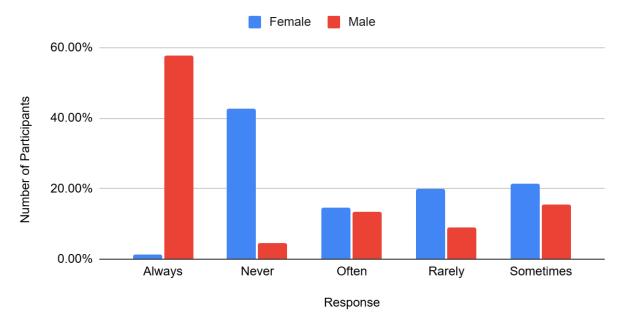
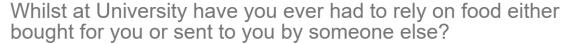


Figure 23 compares the responses of male and female participants when asked if they have ever had to skip a meal at university due to financial difficulties. Firstly, 57.8% of males answered 'always' (n=26) compared to 1.3% of females who answered always (n=1), in comparison to this 4.4% of males answered 'never' (n=2) while 42.7% of females answered 'never' (n=32). 14.7% of females answered 'often' (n=11) compared with 13.3% of males (n=6), 20.0% of females answered 'rarely' (n=15) compared with 8.9% of males (n=4) and 21.3% of females answered 'sometimes' (n=16) compared with 15.6% of males (n=7). Total number of female respondents n=75, total number of male respondents n=45.

Figure 24:



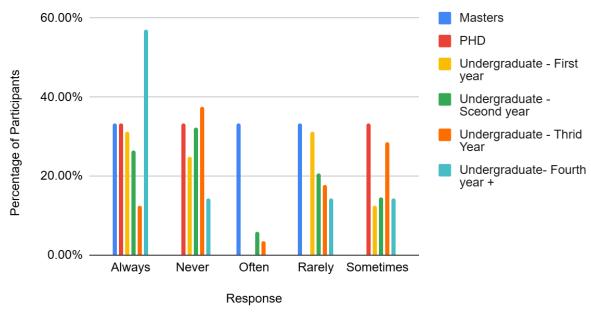


Figure 24 compares the level of study of participants with if they have ever had to rely on food either brought for them or sent to them by someone else. Firstly, 33.3% of master's students answered 'always' (n=1), 33.3% answered 'often' (n=1) and 33.3% answered 'rarely' (n=1). Of participants who are studying for a PHD, 33.3% answered 'always' (n=1), 33.3% answered 'never' (n=1) and 33.3% answered 'sometimes' (n=1). From participants in undergraduate first year 31.3% responded 'always', (n=5), 31.3% responded rarely (n=5), 25.0% responded 'never' (n=4) and 12.5% of participants responded 'sometimes' (n=2). No participants from this group responded 'often'. Of participants in undergraduate second year, the majority, 32.4% responded 'never' (n=11), 26.5% responded always (n=9), 20.6% responded rarely (n=7), 14.7% responded 'sometimes' (n=5) and 5.9% responded 'often' (n=2). The majority of participants in undergraduate third year, 37.5% responded 'never' (n=21), 28.6% responded 'sometimes' (n=16), 17.9% responded rarely (n=10), 12.5% responded 'always' (n=7) and 3.6% responded 'often' (n=2). Finally, of participants in undergraduate fourth year or above 57.1% responded 'always' (n=4), 14.3% responded 'sometimes' (n=1), 14.3% of participants responded 'rarely' (n=1) and 14.3% of participants responded 'never' (n=1). Total number of respondents n=121.

Figure 25:



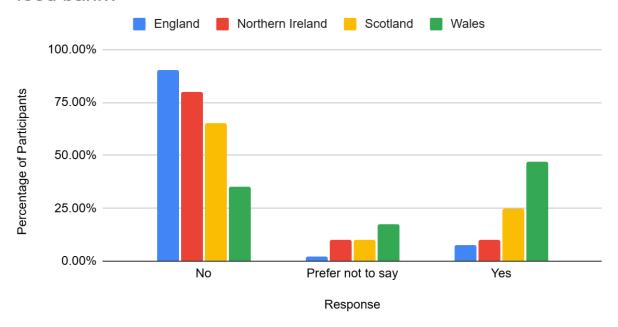


Figure 12 compares where in the UK participants study with if they have had to use a food bank whilst at university in the past 12 months. Wales makes up the largest group of participants answering 'yes', 47.1% (n=8), followed by Scotland, 25.0% (n=5), 10% of participants studying in Northern Ireland answered 'yes' (n=3) and 7.8% of participants studying in England answered 'yes' (n=4). In comparison, 90.2% of participants studying in England answered 'no' (n=46), 80% of participants studying in Northern Ireland answered 'no' (n=24), 65% of Scottish students answered 'no' (n=13) and 35.3% of Welsh students answered 'no' (n=6).17.6% of participants who study in Wales answered 'prefer not to say' (n=3), 10% from those who study in Northern Ireland (n=3), 10% from those who study in Scotland (n=2) and 2.0% from those who study in England (n=1). Total number of respondents n=121.

Figure 26:

Are you aware of any organisations or initiatives that tackle food poverty?

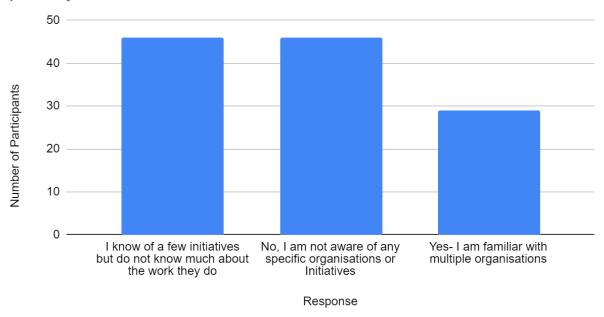


Figure 26 presents the findings when participants were asked if they are aware of any organisations or initiatives that tackle food poverty. 38% of participants responded that they know of a few initiatives, but they do not know much about the work they do (n=46) and 38% of respondents answered no they are not aware of any specific organisations or initiatives (n=46). 24% of respondents answered yes, they are familiar with multiple organisations (n=29). Total number of respondents n=121.

Figure 27:

If you felt that you were experiencing food poverty, how likely are you to reach out to an organisation, outside of your university for assistance?

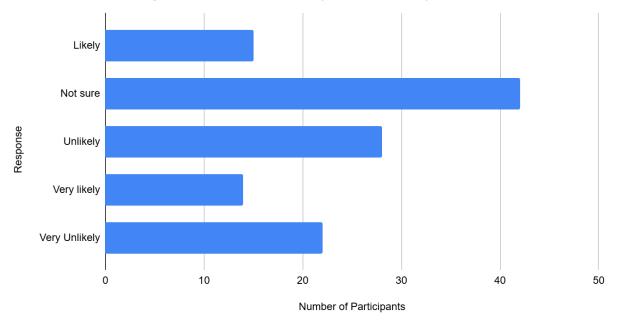


Figure 27 shows the responses of participants when asked how likely they would be to reach out to an organisation outside of their university if they were experiencing food poverty. The majority of participants, 34.7% responded 'not sure' (n=42), followed by 23.1% of participants that responded 'unlikely' (n=28) and 18.2% of participants responded very unlikely (n=22). 12.4% of participants responded likely (n=15) and 11.6% of participants responded very likely (n=14). Total number of respondents n=121.

Figure 28



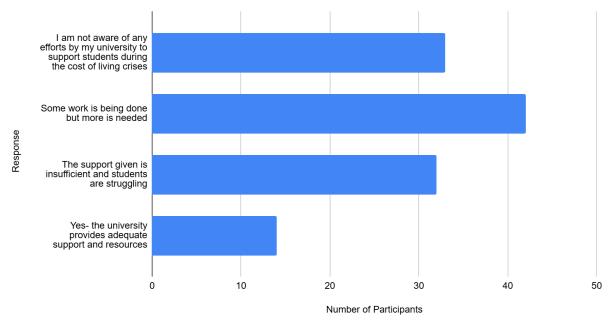
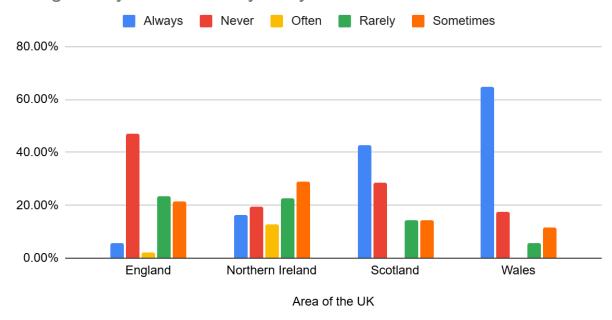


Figure 28 shows the responses of participants when asked if they feel their university is doing enough to support students during the cost-of-living crises. The majority of participants, 34.7% responded that some work is being done but more is needed (n=42), followed by 27.3% of participants who answered that they were not aware of any efforts by their university to support students during the cost-of-living crises (n=33). 26.4% of participants responded that the support given is insufficient and students are struggling (n=32) and 11.6% of participants responded that yes, their university provides adequate support and resources (n=14). Total number of respondents n=121.

Whilst at University have you ever had to rely on food eith

Whilst at University have you ever had to rely on food either bought for you or sent to you by someone else?



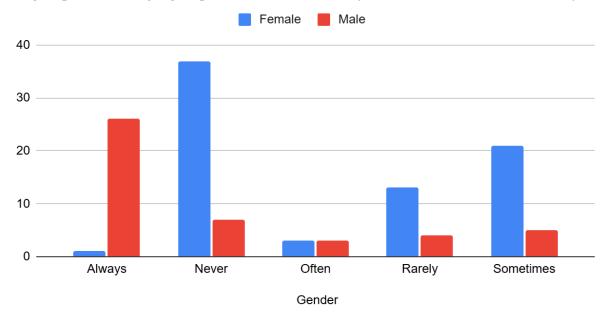
Chi-Square Tests	Value	df	Asymptotic Significance (2-sided)
Pearson Chi- Square	46.290ª	16	<.001
N of Valid Cases	121		

Figure 29 shows the results from a chi-square test determining if there is a significant association between area in the UK that participants study in and if they have ever had to rely on food bought for them or sent to them by someone else. The results indicate a

statistically significant association between the variables as the p value is less than 0.01, indicating the association is not due to chance.

Figure 30

Whilst at University, have you ever had to choose between buying food or paying for essentials? (Such as rent or utilities)



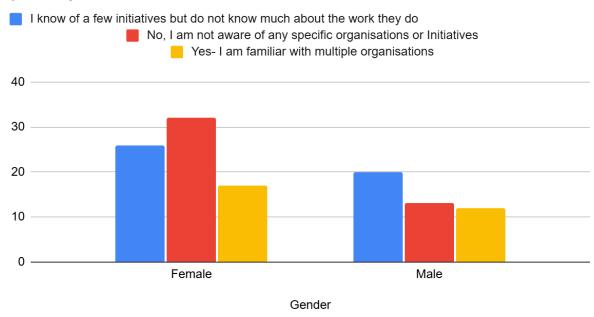
Chi-Square Tests	Value	df	Asymptotic Significance (2-sided)
Pearson Chi- Square	57.917ª	8	<.001
N of Valid Cases	121		

Figure 30 shows the results of a chi square test used to determine if there is a significant relationship between gender and choosing between buying food or paying for essentials. The p value is less than 0.01 indicating that there is a statistically significant association between the two variables.

Figure 31

What gender do you identify as vs are u aware of any organisations that tackle food poverty.

Are you aware of organisations and initiatives that tackle food poverty?



Chi-Square Tests	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.943ª	4	.414
N of Valid Cases	121		

Figure 31 shows the results of a chi-square test conducted to compare gender and awareness of organisations that tackle food poverty. The results show a p value of 0.414 suggesting that there is no statistically significant association between the two variables as the p value is greater than 0.05.

5.0 Discussion.

5.1 Introduction.

The aim of this study was to investigate the prevalence and impact of food poverty on UK students. Online questionnaires were used by the researcher to gather data. This chapter will discuss the findings of the study, determining similarities of this study to previous studies, reviewing strengths and limitations of the study and outlining improvements which could be made if the study was to be repeated.

5.2 Key findings.

In order to ensure clarity and consistency a clear standardised definition of food poverty was provided for participants at the beginning of the section of survey questions relating to food poverty. The online questionnaire found that 22.3% of participants answered 'always' when asked if they have ever had to choose between buying food or paying for essentials, 22.3% of participants answered 'always' when asked if they have ever had to skip a meal due to financial difficulties and 23.1% of students answered they always rely on food sent to them or bought for them by someone else. As well as this 24% of participants answered they always worry about being unable to afford food or running out of food and 16.8% of participants had visited a foodbank in the past 12 months. These findings highlight a clear problem of food poverty among students.

5.3 Explanation of key findings.

One of the deep-rooted causes for student food poverty is insufficient student loans. Figure 14 shows that 35.5% of respondents to the questionnaire do not believe they receive enough support from student finance and often struggle to make ends meet and 19.8% of participants have to seek additional support. These statistics are backed up by a study carried out by the National Union of Students which found 75% of students say that their loan or bursary does not cover their cost of living comfortably (NUS UK, 2024). The ongoing cost of living crises has exacerbated the situation for students over the past few years, more than 92% of students have reported that their cost of living has increased and 91% of students are worried about the continuing rising living costs (Office for National Statistics, 2023). Figure 28 shows that 26.4% of survey participants believe that the support by universities to help students during the cost-of-living crises is insufficient and students are struggling, 34.7% of participants answered that some work is being done but more is needed and 27.3% of participants answered that they are not aware of any efforts by their university to support students during the cost of living crises. Despite the Chief Executive of UK Universities stating that "Universities have stepped up to alleviate cost of

living pressures for students in a number of ways, including through boosting their emergency financial assistance funds and providing affordable eating schemes" (Brown, 2024), only 11.6% of participants answered that they believe the support and resources are adequate. The effects of rising living costs and insufficient support from universities are vast. Figure 20 shows that 24% of survey participants responded that that yes, their academic performance has been hindered by food poverty and 23% of participants occasionally believed they underperformed due to food poverty. This is backed up by a survey of 8,800 university students carried out by the Russel Group Students' Union which found that over half of participants reporting their academic performance has suffered as a result of the cost-of-living crises (Russel Group, 2023). This research is further backed up by a study carried out by the Sutton Trust which found that 49% of students had missed classes to carry out paid work and 23% had missed a deadline or asked for an extension in order to work (Carter, 2023).

The findings also show that, based on the sample that participated in the questionnaire, 16.8% of participants had used a food bank in the past 12 months (figure 25). These results are similar to that of a study of over 6,500 students carried out by the National Union of Students which found that the cost-of-living crises has only got worse since 2022 with 14% of students using food banks in the 23/24 academic year double the rate it was in 2022 (National Union of Students, 2024). The researcher wanted to determine if the area of the UK the participants studies in has an effect on food bank use. Based on the results, figure 25 shows that Wales has the highest level of food bank use, followed by Scotland then Northern Ireland with England having the lowest rate of foodbank use among students. This is backed up by data which has found that Wales has a higher number of rural areas where accessing affordable food is a problem compared with England and Scotland (Leeds Institute for Data Analytics, 2022). As well as this data from Trussel has revealed that Scotland has higher rates of people who are worried about food poverty than other areas of the UK (Trussell, 2025). The researcher determined that although food bank use was a general indicator of food poverty it was not completely reliable as other factors may influence an increased food bank use, including availability of food banks, the stigma associated with food banks and university ran food banks. To gain a more accurate insight into how levels of food poverty differ across the UK the researcher carried out a chi-square test to determine if there was a statistically significant relationship between area of the UK and if they have ever had to rely on food bought for them or sent to the by someone else. The results showed that the relationship was statistically significant meaning that the region of the UK where a participant's study seems to have a measurable impact on whether they have had to depend on others for food.

A survey of 1,234 students at three UK universities and one university in the USA in April 2020 found that males have slightly higher levels of food insecurity than females, the survey found that 21.3% of males have very low levels of food security compared to 15.3% of female students (Defeyter et al., 2020). The researcher wanted to determine if the findings of this study would show similarities to previous studies in terms of gender and food poverty. The researcher compared male and females' responses when asked if they have ever had to skip a meal due to financial difficulties. Figure 23 shows that 57.78% of males answered 'always' compared with 1.33% of females and 42.67% of females answered 'never' compared with 4.44% of males. The researcher also compared males and females' responses when asked how often they worry about running out or being unable to afford food. Figure 16 shows that 62.22% of males answered 'always' compared with 1.33% of females and 20% of females answered 'never' compared with 8.89% of males. A chi-squared test was conducted to determine if there was a statistically significant relationship between gender and having to choose between buying food and paying for essentials. The results of the test show that there is a statistically significant relationship between these variables. Indicating that gender does have an impact on having to choose between buying food or paying for essentials. Despite this study showing similarities to the findings of the study carried out by Defeyter et al., in 2020 and showing that males have higher incidence of food insecurity than females it contradicts Grimaccia and Naccarato (2020) who found that women have a higher probability of experiencing food insecurity compared to men. These findings raise questions over why male students in the UK appear to have significantly higher levels of food poverty and if there is anything which could be done to fill this gender gap.

In order to understand if there was a link between level of study and food poverty rates the researcher used a bar chart. Figure 24 compares level of study and if the participant has ever had to rely on food either bought for them or sent to them by someone else. The results show that there is no clear link between these variables and level of study does not appear to have an influence on levels of food poverty. This was surprising to the researcher as before analysing the results of the questionnaire the researcher thought there would be a decrease in food poverty levels as the student progressed through university due to increased financial literacy, more budgeting experience and more awareness of available food resources.

Many previous studies investigating food poverty have failed to examine knowledge and awareness of resources as well as perceptions of reaching out to these organisations. Through studying this area this research has expanded on various previous studies and plugged an important gap in research. The questionnaire found that 38% of participants were not aware of any organisations or initiatives and a further 38% of participants were

aware of a few initiatives but did not know much about the work they do. Although this does not directly explain food poverty levels this lack of knowledge may be exacerbating the issue of food poverty and worsening the situation for students already struggling with the current cost of living crises. As well as this, when asked how likely they would be to reach out to an organisation, outside of their university, if they felt they were experiencing food poverty, 18.2% of participants answered 'unlikely' and 23.1% of participants answered 'unlikely'. Garthwaite (2016) states that fear of being labelled as a scrounger means that people delay accessing food poverty support until they no longer have a choice. There is stigma associated with reaching out for help while experiencing food poverty which may explain why participants feel they would not take advantage of available help if they felt they were struggling.

5.4 Implications for Public and Environmental Health.

Those experiencing food poverty are at an increased risk of being diagnosed with chronic conditions including heart disease, chronic pain and rheumatological conditions. As a consequence, adults who are experiencing food insecurity are more likely to die prematurely, on average severely food insecure adults die nine years earlier than their food secure counterparts (BMC Medicine, 2023). A systematic review has also found that food poverty contributes to an increased risk of depression. The review further found that the higher the severity of food insecurity, the higher the risk for depressive symptoms. The review further found that food insecurity is heavily linked with stress and anxiety across the whole population (Pourmotabbed et al., 2020). Anxiety and depression are both heavily linked with cognitive function and therefore emotional difficulties have negative impacts on students' academic performance (Awadalla, Davies and Glazebrook, 2020). As well as this, many of the poor eating habits developed at university can continue into adulthood and on for decades (Science Daily, 2023).

Food poverty not only has impacts on individuals but has a strain across the Health Service in the UK. Increased food insecurity could place unmanageable pressure on the NHS and stretch budgets even further. Food insecurity will cost the NHS now and further into the future for treating acute and chronic conditions caused by hunger, inadequate nutrition and unhealthy diets. In 2014/15 the NHS spent £6.1 billion on treating obesity related ill-health and this is predicted to continue to rise to £9.7 billion per year by 2050. In addition to this, malnutrition is estimated to cost the NHS in England £19.6 billion per year (Lowe and Mahmood, 2022).

5.5 Strengths and Limitations of Results

The researcher highlighted a number of strengths of the research study. Firstly, the use of questionnaires was a significant strength of the study. According to Rashid (2020, cited in Kuphanga, 2024)) questionnaires are cost effective and useful when dealing with a large and widely dispersed target population. Questionnaires give respondents time to provide well throughout responses, improving the quality of the data obtained. As well as these questionnaires are easily accessible by groups which would otherwise be hard to reach. As students are a large demographic group covering a significant area, online questionnaires were the most appropriate method to reach this group. A further strength of the research was the number of respondents to the questionnaire, having 121 participants allowed the researcher to make more accurate generalisations about the target population. A high number of responses also increased the overall reliability of the data collection by providing a broader representation of the entire target population. The questionnaire was kept anonymous which allowed the researcher to collect high quality usable data

encouraging more honest answers than other methods and reducing bias, for example interviewer bias (Marshall, 2005). Another strength of the researcher was that the researcher piloted the questionnaire which highlighted certain wording issues of questions and issues with overall clarity of the questionnaire. Including questions around student loans, living situation and level of study. Through piloting the questionnaire, the researcher was able to edit these issues before sending out the questionnaire. According to Teijlingen and Vanora (2002) piloting a questionnaire can identify issues with wording and order of questions and with the range of available answers. Another strength of the research was the use of demographic questions, asking these questions allowed the researcher to compare variables and make comparisons with previous studies.

The researcher also identified a number of limitations of the study. Firstly, there was a significantly higher number of female respondents. This uneven gender distribution could have led to biased results or generalisations that do not accurately reflect the target population. Despite the uneven distribution the researcher found some significant differences between male and female participants experiences with food poverty, highlighting the need for further research on male students' experiences. As well as gender imbalance, despite the studying aiming to understand food poverty among students across the UK there was an unequal distribution of respondents from areas of the UK with England and Northern Ireland having a much higher proportion of respondents than Scotland and Wales. As a result, the study may not have produced data which is a full representation of the problem in all areas of the UK. The use of an online questionnaire also creates a problem of self-selection bias. Self-selection bias refers to a type of bias that occurs when individuals disproportionately select themselves into a questionnaire (Elston, 2021). In the case of this study the people who choose to participate may have felt more passionate or involved in issues of food poverty among students than those who did not. A key limitation throughout this study was that it is a student led research product with limited time and money which determined the scope of the research.

6.0 Conclusion

Prior to carrying out this study, the researcher conducted a literature review and established that there was a significant lack of previous studies investigating the issue of food poverty among students in the UK. After identifying this gap in literature UK students were chosen as the target population for the study and online questionnaires were chosen as the method for gathering data.

The study identified the prevalence of and the impact of food poverty among students in the UK. The majority of participants answered that student loans are not enough and they often struggle to make ends meet, they worry about running out of food or not being able to afford food, the price of food always comes before the nutritional value of it and they have previously had to choose between buying food or paying for essentials. A number of students (16.8%) also answered that they have to resort to using a foodbank in the past 12 months. The findings represent a significant problem of food insecurity among this group which has been overlooked by policy and previous academic research.

The findings confirm a need for measures to be put in place to prevent students falling into financial trouble, which leaves them struggling to afford food whilst at university. The researcher recommends that the UK government must increase student maintenance loans in line with the rising living costs to support students and ensure that university is an option for the whole population. Universities must also play a role in supporting students and work harder to identify students who are struggling and organise university led initiatives to combat this significant problem.

The findings indicate that more research is needed on this issue and a study on a much larger scale is necessary to identify the true extent of the problem across the UK.

7.0 Recommendations

The findings of this research indicate that a new approach is needed to tackle student food poverty and address the underlying causes of the problem. The researcher has developed a number of recommendations.

- It is the researcher's opinion that the government should review the student loan policy in the UK and aim to increase the minimum maintenance allowance in line with the continuing rising living costs to ensure students can live comfortably whilst at university.
- The researcher also recommends the government introduces emergency grants and funds that students who are facing food insecurity are able to easily access during times of need.

The researcher further makes a number of recommendations for universities to tackle the issue.

- The researcher recommends that universities should introduce student led
 initiatives to raise awareness of the issue of food poverty, provide budgeting advice
 for how students should budget their student loans monthly and raise awareness of
 organisations which are available to help students both inside and outside of the
 university.
- Universities should also look to implement subsidised meal programs in order to help students suffering from food poverty by providing them with a hot meal whilst on campus, for example weekly dinner clubs.

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Appendices

Appendix 1

Participant Information Sheet

Research Ethics Committee Reference Number: PAHUG1136

Title of Project: A comprehensive study exploring the prevalence and impact of food poverty among students at University in the UK

You are being invited to take part in a research project. You do not have to take part if you do not want to. Before you decide, it is important for you to understand why the project is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether you wish to take part.

What is the purpose of the project?

This study is a student led project, and the data will be used in the researcher's undergraduate dissertation study. The project aims to gather data on the prevalence and causes of food poverty among students in the UK. As well as investigating the factors contributing to their situation. Overall, the study aims to gather a better understanding of food poverty among students therefore gaining an understanding of the need for support services such as food banks and meal programs within UK universities.

This study aims to answer key questions regarding food poverty among students including questions around prevalence, the primary causes, the impacts on an individual and students' awareness of resources and initiatives available to students struggling financially.

Why have I been invited to participate?

You have been identified as a potential participant because you have responded to an advertisement on social media or an email asking for participants to take part in this study. To take part in this study you must be over the age of 18 and study at a university in the UK. In order to minimize risk and ensure effectiveness of the research you must not participate if you are under 18 or you do not study at university in the UK.

Do I have to take part?

No. You can ask questions about the project before deciding whether to take part. If you do not want to take part that is OK.

Submitting the questionnaire implies your consent to participate in this project. You can stop being part of the project at any time, without giving a reason. You may withdraw from the project by pressing the 'Exit' button, closing the browser and not completing/submitting the questionnaire.

Anonymous data already collected will be retained and used because we cannot trace this information back to you.

What will happen to me if I take part?

The questionnaire will be conducted online (using your phone, tablet, laptop or PC) and includes questions that will ask you about food poverty. First you will be asked a few general questions such as your age and where you study. These questions will be followed by questions regarding your awareness of food poverty, your financial situation and your personal experiences. Lastly you will be asked questions about your awareness of support and resources available and your likeness to use this support? The questionnaire should take 15-20 minutes to complete. The topic might be considered sensitive because discussing financial situation and food poverty may be triggering to some people who are currently or have previously experienced financial hardship. With this in mind, please consider your privacy when completing the questionnaire so that nobody can oversee your answers.

Are there any possible disadvantages or risks in taking part?

Some questions included in this research may create discomfort for the participant as the project requires people to discuss their financial situations and experiences of food poverty. Questions included in this project require participants to reflect on their wellbeing. If you feel worried or in a low mood, we would like to point out that there are several sources of advice or help which are free and readily available to you and which may provide useful information. Specifically, these include:

Mind - https://www.mind.org.uk

Young Minds- https://www.mind.org.uk

or alternatively, contact your university wellbeing service.

As well as this there are also several charities which aim to tackle food poverty which are available to reach out to for support.

Trussell Trust- https://www.trussell.org.uk/emergency-food

Feeding Britain- https://feedingbritain.org

The procedures involved in this project may be emotionally stressful – this may manifest as distress, worry and anxiety you should not participate in if you do not wish to be emotionally stressed.

Are there any benefits in taking part?

There will be no direct or personal benefit for those people participating in the project.

It is hoped that this project will lead to a better understanding of food poverty among students and therefore awareness of the need for change and support systems for students.

What information will be collected and what will happen to the information/data provided?

The information you provide as part of the project is the **project data**. Your participation in this project will not involve the collection/use of personal data by the investigator.

Will the project be published? Could I be identified from any publications or other outputs?

The findings of the project will be written up in a dissertation. As the data collected is anonymous there will be no identifiable data written in the dissertation.

Whom do I contact if I have a concern about the project or I wish to complain?

If you have a concern about any aspect of this project, please contact the students' supervisors Graeme Mitchell, g.k.mitchell@ljmu.ac.uk or Conan Leavey c.leavey@ljmu.ac.uk and we will do our best to answer your query. You should expect a reply within 10 working days. If you remain unhappy or wish to make a formal complaint, please contact the Chair of the Research Ethics Committee at Liverpool John Moore's University who will seek to resolve the matter as soon as possible:

Chair, Liverpool John Moore's University Research Ethics Committee; Email: FullReviewUREC@ljmu.ac.uk; Tel: 0151 231 2121; Research Innovation Services, Liverpool John Moore's University, Exchange Station, Liverpool L2 2QP

Contact details

Principal Investigator: Aimee McCloy LJMU undergraduate student.

LJMU Email address: phiamcel@ljmu.ac.uk

LJMU School/faculty: The Public Health Institute

LJMU Central telephone number: 0151 231 2121

Supervisor Name: Graeme Mitchell

Supervisor's LJMU Email address: g.k.mitchell@ljmu.ac.uk

Supervisors Name: Conan Leavey

Supervisors LJMU Email Address: c. leavey.ac.uk

Appendix 2: Questionnaire

I have read the information sheet provided and I am happy to participate. I understand that by completing and returning this questionnaire I am consenting to be part of this study and for my data to be used as described in the information sheet provided

*

- 1. What Gender do you identify as?
- -Male
- -Female
- -Prefer not to say
- 2. Where in the UK do you study?
- England
- -Scotland
- -Wales
- -Northern Ireland
- 3. What is your current level of study?
- -Undergraduate- First year
- -Undergraduate- Second year
- -Undergraduate- Third year
- -Undergraduate- Fourth year+
- -PHD
- -Masters
- 4. What is your living situation during term-term?
- -University Halls
- -Shared Housing at University
- -Living at home with parents
- -Living at home in owned/mortgaged property
- -Living at home in rented properly
- 5. Do you receive a maintenance loan from Student Finance?
- -Yes
- -No

6. Do you work a part-time job during term-time? -Yes -No - Not currently, but I am seeking employment 7. How many hours a week on average do you work? -Up to 8 -9-16 -17-25 -26-30 -30+ - I do not currently work
 8. How many children are you a parent/guardian to? (who live in your household and are dependent on you, aged 17 and under) None -1-2 -3-4 -4+ -Prefer not to say
9. Does Student Finance cover your tuition fees for university?-Yes-No
 10. Do you use your maintenance loan to pay for rent? Yes- I use my maintenance loan to pay for rent No- I pay for rent using my savings No- I pay for rent with money from a part-time job No- My parents/guardians cover my rent No - I live at home with my parents No-Other
If other, please explain Long answer text

11. Other than student finance do you receive any other financial help such as benefits, a

bursary or hardship fund?

- -Yes- Benefits
- Yes- Bursary
- -Yes- Hardship Fund
- Yes- Other
- Yes- Help from family or friends
- -No- I do not receive any help other than student finance

If other, please explain.

Long answer text

- 12. Do you believe you receive enough financial support from student finance and/or your university?
- Yes- The Financial support I receive is adequate
- It is mostly adequate, but some months are tight
- -I receive some support, but I have to seek additional support to manage
- No, I often struggle to make ends meet
- 13. During term-time at university, who is responsible for budgeting and buying your food?
- Myself
- Myself and sometimes jointly with someone else
- Myself and always jointly with someone else
- Someone else

After section 1

Continue to next section

Section 2 of 2

Food Poverty

The following questions all relate to food poverty, for the purpose of this questionnaire food poverty can be defined as the condition of not having access to sufficient food, or food of an adequate quality.

- 14. How often do you worry about being unable to afford food or running out of food?
- -Never
- -Rarely
- -Sometimes

-Often
-Always
15. Whilst at University, In the last 12 months have you experienced financial difficulties which have left you struggling to afford food?
-Never
-Rarely
-Sometimes
-Often
-Always
16. Are you aware of any food poverty issues among your peers/classes?
- Yes, several of my classmates/peers openly struggle with food poverty
- I am aware of a small number of peers/classmates facing the issue
- I have heard about it but do not know anyone specifically
- No, I have not noticed any food poverty issues
17. How detrimental do you feel that food poverty could be on a student's academic performance? - Very detrimental - Detrimental - Not very detrimental - Not detrimental at all
18. Whilst at University have you ever felt that food poverty has affected your academic performance?

- Yes- it has hindered by ability to focus and perform well

- Occasionally I have felt that I have underperformed due to lack of proper nutrition

- No, I have not experienced food poverty affecting academic performance
19. When choosing food, how often does the price of food come before the nutritional value of it?
-Never
-Rarely
-Sometimes
-Often
-Always
20. Whilst at University, have you ever had to choose between buying food or paying for essentials? (Such as rent or utilities) -Never
-Rarely
-Sometimes
-Often
-Always
21. Whilst at University, have you ever had to skip a meal because of financial difficulties?
-Never
-Rarely
-Sometimes
-Often
-Always

- Rarely, but once or twice I feel I have been affected

you by someone else?
-Never
-Rarely
-Sometimes
-Often
-Always
23. Whilst at university in the past 12 months have you visited a food bank? -Yes -No -Prefer not to say
 24. Are you aware of any organisations or initiatives that tackle food poverty? Yes- I am familiar with multiple organisations I know of a few initiatives but do not know much about the work they do No, I am not aware of any specific organisations or Initiatives
25. If you felt that you were experiencing food poverty, how likely are you to reach out to an organisation, outside of your university for assistance? - Very Unlikely - Unlikely - Not sure - Likely - Very likely
26. Do you feel your university is doing enough to support students during the continuing cost of living crises?Yes- the university provides adequate support and resources

- I am not aware of any efforts by my university to support students during the cost-of-living

- Some work is being done but more is needed

crises

- The support given is insufficient and students are struggling

Appendix 3: Ethical Approval Email.

Dear Aimee

Thank you for registering your study as minimal risk.

School REC approval reference number: PAHUG1136
Aimee McCloy 996091 BSH Environmental Health

Project Title: A survey study exploring the prevalence and impact of food poverty among students at University in the UK.

Supervisor: Graeme Mitchell

Approval is given on the understanding that:

- The study is conducted in accordance with UREC Approved <u>SP&BP01</u>
 "EXPEDITED ETHICAL REVIEW PROCESS FOR MINIMAL RISK PROJECTS"
- The information included in the <u>participant/parent/carer/gatekeeper facing</u>
 <u>documents</u> are always current and informed by ongoing risk assessments and
 any changes to current practices and include the correct data processing,
 management and protection information from the <u>latest LJMU templates</u>.
- Any adverse reactions/events which take place, or any unforeseen ethical issues arising, during the course of the project or are reported to the School REC;
- Where any amendments are proposed to the study a <u>study amendment form</u> must be submitted to the School REC.
- The project will comply with the LJMU Research Ethics and Governance SOP 1.0 Dec'23.docx, the LJMU Health and Safety Codes of practice and risk assessment policy and procedures and LJMU code of practice for research.
- Ensure the study is covered by UMAL liability/indemnity
- Agreements/contracts are arranged as required (e.g. collaboration agreements, general agreements, data processing/sharing agreements, intellectual property rights agreements, financial provisions agreements/contracts, material transfer agreements etc.)
- Where relevant appropriate gatekeeper / management permission must be obtained prior to the study commencing at the study site concerned.
- The LJMU logo is used for all documentation relating to participant recruitment and participation e.g. poster, information sheets, consent forms, questionnaires.
- The study consent forms, study data/information, all documents related to the study etc. will be accessible on request to a student's supervisory team

and/or to responsible members of Liverpool John Moores University for monitoring, auditing and data authenticity purposes.

Please note that approval is given for a period of one year from the date granted and therefore the expiry date for this project will be one year from this date. An application for extension of approval must be submitted via a <u>study amendment</u> <u>form</u> to the School REC if the project continues after this date.

For further information about LJMU research ethics and governance please visit the <u>LJMU webpages</u>

Your sincerely

PAHREC



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