



Meal Deals and The Social Organisation of Soft Drink Consumption: a Qualitative Study.

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March 2021

Acknowledgements

Foremost, thank you, my God, for the continued blessings you have given me throughout my research from the beginning until the end. Thank you for providing me with the strength and ambition to complete this thesis.

Special thanks and my immeasurable appreciation go to my lovely supervisors Barry Gibson and Alison Patrick. I would like to thank Barry for the valuable guidance he has given me over this project and for the books he has suggested, which have made me the scientifically-minded and improved person I now am. Further thanks go to Alison for her wonderful support and encouragement throughout the research process, which has had a significant positive impact on my journey.

I would also like to express my gratitude to my family for their support over the last four years. Phenomenal thanks to my extraordinary father Dr Mahmoud Sarhan, may he rest in peace, for the academic support, love and repeated assurance he gave me during the first four months of my PhD. His presence beside me at the beginning of this process ignited in me a spark that will endure always.

Special thanks to my brothers Ahmed and Abdulrahman for their continued assistance, endless caring and valuable advice.

I wish to express my deep gratitude and appreciation to my friends Hamza Ghamri, Haroon Ghamri, Hisham Al Hazmi, Hathal Al Bogami, Raed Al Jannadi and Mahir Mirah for their help and for listening to my lengthy discussions about my progress on this project.

My sincere gratitude and special appreciation go to my employer Taibah University for funding my PhD studies and living expenses through the Saudi Arabian Cultural Bureau.

Abstract

Background

High levels of soft drink consumption have been identified as the main reason for high levels of sugar consumption, which can have both oral and general health consequences. High levels of sugar consumption are implicated in dental caries, dental erosion, obesity and type 2 diabetes. The factors associated with soft drink consumption are various and diverse and have been examined primarily using quantitative research methods. Existing research has adopted an individualistic focus, highlighting individual factors associated with soft drink consumption at the expense of exploring the role of context and daily activity. This research aims to explore soft drink consumption as a social phenomenon in the context of everyday life.

Methods

This research adopts a multistage observational study involving observations, formal and informal interviews. A total of 15 weeks of observation, 14 informal interviews and 7 formal interviews were conducted to address the research aim. Data analysis started with the exploration of the meanings of soft drink consumption then moved on to examining the practices associated with soft drink consumption before finally seeking out the situational determinants of behaviours.

Results

Findings indicate that soft drink consumption as a social practice is not performed in isolation but coexists with other social practices such as eating, studying and socialising. Furthermore, the environment heavily influences soft drink consumption especially through meal deals. The study subsequently examines the construction and arrangement of meal deals examining how they increase soft drink consumption.

Conclusion

This thesis concludes that the construction and arrangement of meal deals in shops and on shop shelves is designed to influence soft drink consumption. The price of meal deals, the availability of soft drinks as an option within meal deals all create a situation that encourages the consumption of soft drinks. Thus, managing and reconfiguring the structure of meal deals can directly inform the soft drink consumption. It is important therefore for public health to consider carefully the importance of the contexts in which soft drinks are found.

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Introduction

Preface

High levels of soft drink consumption have been identified as the main reason for high levels of sugar consumption (Public Health England, 2015). These high levels of sugar consumption have both oral and general health consequences (Popkin, 2012) and are implicated in dental caries, dental erosion, obesity, and type 2 diabetes (Schulze et al., 2004; Hua and Malik, 2010; May and Waterhouse, 2003; Tahmassebi et al., 2006).

Given that proximal causes are an essential issue in public health research, this thesis begins with a consideration of the evidence showing a link between sugar-sweetened beverage consumption and a range of health conditions. However, consideration of proximal causes is only part of the story I tell in this thesis. The latest direction of the public health approach focuses on the wider determinants of health and disease. One of the directions my thesis takes is to highlight these determinants to improve our understanding of them and contribute to the public health literature. The public health literature around soft drink consumption tends to adopt an individualistic focus, highlighting the individual factors associated with soft drink consumption at the expense of exploring the role of social context. In addition, most of the studies available on soft drink consumption are quantitative in nature. This thesis adopts a qualitative approach and provides new insights through the use of social practice theory, it aims to explore soft drink consumption as a social phenomenon in the context of everyday life.

Generally speaking, the term “soft drinks” in this thesis refers to sugar-sweetened beverages excluding coffee, tea, fresh juices and alcohol. However, this definition is not applied in the literature review as the studies I cite vary in their definition of soft drinks and sugar-sweetened beverages.

However, to effectively contextualise this thesis and as a part of reflexivity, I must acknowledge several things to clarify how and why this project was developed, the direction it took and how it progressed.

I am from Saudi Arabia originally and am a dentist with a bachelor in dentistry. After I completed this degree, I decided to embark on a career in Dental Public Health. Therefore, I travelled to the UK to pursue a postgraduate degree in public health with a focus on dentistry. I completed my master’s degree in Dental Public Health and this current project is for a PhD

at the School of Clinical Dentistry. Since I completed my bachelor's degree, I have developed a passion for the field of nutrition. This passion probably developed because of the health information that I was exposed to during my bachelor's degree. Afterwards, when I met my primary PhD supervisor for the first time, he suggested I study the issue of sugar consumption. I agreed immediately because this suggestion matched my interests and because I know from my previous studies that sugar can have negative effects on human health. Being in the field of public health, having an interest in nutrition and my supervisor's suggestion all played a vital role in helping me choose and develop my thesis topic.

Another important reason why I chose this topic and felt that investigating it could potentially have positive outcomes was that, in public health, nutrition, in general, is a vital topic and there is abundant discussion around the risk of consuming too much sugar, as presented in my literature review. Additionally, focusing on nutrition might be helpful for my career because, as a public health professional, I may need to give lectures on this topic. Given all of this, I concluded that my research could potentially benefit the public health literature and my career ambitions. These were not the only reasons why I chose this topic, other reasons that prompted me to conduct this study are presented in sections 1.9 and 1.10. However, briefly, when I started my PhD, I revised the literature for several months until I understood the gap in the research and came to the conclusion that soft drinks were worth exploring. As this thesis uses sociological theories to approach soft drinks, it is important to mention again that I am originally a dentist who had, at the beginning of this PhD, no background in sociology. However, my primary supervisor is a sociologist who suggested some sociology texts to me and that I use sociological tools to approach the phenomenon of soft drink consumption.

It is important to note that my role as a public health professional has influenced data collection in this study and the interpretation of the observational data. Precisely how my public health background influenced data collection is discussed in the materials and methods chapter (Chapter 4). In particular, in stage one, the goal of data collection was to understand the phenomenon of soft drink consumption in general. This goal was inspired by my public health background because understanding soft drink consumption will help us to understand why people consume soft drinks and how to reduce this consumption.

The aim of data collection in stages two and three (section 4.3 and 4.4) was to collect data on meal deals to understand more about the link between meal deals and soft drinks. This aim

again reflected my public health background and desire to understand more about soft drink consumption as I know that excessive sugar consumption is unhealthy.

My professional background in public health has also influenced the interpretation of the observational data. This is evident in my results chapters and the discussion on sugar. In particular, in section (6.2.2.1) I discuss how, when a participant decides to buy meal deals, it is easy for them to be directed toward high sugar consumption options by the arrangement and construction of meal deals in shops. It is obvious from this discussion that my concern is on sugar consumption and this is a result of my public health background.

Also, my experience in dental public health has, to a limited degree, influenced the direction of this thesis. This influence is reflected in my literature review when I discuss the link between soft drinks and dental conditions such as dental caries and dental erosion (sections 1.4.2 and 1.4.3). Additionally, because of my background in dental public health, I discuss some of the implications of this research for dental public health (section 8.2.2). Above is part of the reflexivity related to this research. However, other discussions around reflexivity relevant to this project are distributed over several sections of the thesis, namely, sections 2.1, 4.2.3, 4.2.6, 4.3.3, 4.4.3, 4.5 and 7.4.

In what follows I will provide a brief outline of each section of the thesis.

Chapter 1: Literature Review

This chapter describes the key points of the existing public health literature on soft drink consumption. The different sections of this chapter cover the main themes that are discussed in the literature related to the phenomenon of soft drink consumption, specifically, the general rate of soft drink consumption, the rate of consumption in different age groups, the diseases associated with soft drink consumption, the factors that influence soft drink consumption and the public health interventions designed to reduce the health burden of soft drink consumption. Additionally, one more sub-section discusses the qualitative papers conducted in the domain of soft drink consumption. This chapter ends by providing a summary of the literature review and identifying the gap in the research on soft drink consumption.

Chapter 2: Theoretical Framework

This chapter discusses the social theories I use as a framework for my thesis. In particular, it describes social practice theory in detail as this is the chief theory relied on in this project.

Actor network theory is also discussed as a secondary theory used in this research. In this chapter, I define each theory and give some background about its use, including presenting the main concepts and aspect of the theory that are relevant to my project. This chapter ends by outlining the aim and objectives of this qualitative study.

Chapter 3: Methodology

In this chapter, I present the range of methodologies that have been used to apply social practice theory. In particular, I explain and present Nicolini's (2012) approach to the study of social practices. Additionally, I discuss why I use observation as a methodology in my research and present some background information about ethnography, which to a certain extent, inspired my use of observation.

Chapter 4: Material and Methods

This chapter explains in detail how this research has been undertaken and the instruments and techniques I use across this research project. In particular, it describes the research contexts and sites, sampling strategy, participants' information, recruitment process, data collection instruments, data analysis methods, reflexivity and ethical considerations. This chapter is divided into three main sections as this research has been conducted in three stages, and each stage is explained in depth. Below, I present the findings of this study.

Chapter 5: Results (Part 1): Soft drink consumption as a social phenomenon

This chapter presents a detailed explanation of the findings of this research concerning soft drink consumption.

Chapter 6: Results (Part 2): Meal deals

This chapter presents in detail all of the results related to the phenomenon of meal deals.

Chapter 7: Discussion

This chapter discusses the results and analyses provided by this project with a focus on what this study contributes to the literature on soft drink consumption and the value of social practice theory to this field. This chapter ends by outlining and discussing the limitations of this qualitative study.

Chapter 8: Conclusion and Recommendations

This chapter outlines the main findings of this research and the corresponding implications of these findings. This chapter also presents a summary of the recommendations that might positively impact and help to inform health interventions concerning the soft drink consumption and meal deals.

Chapter 1: Literature review

1.1 Introduction

This section presents a review of the literature on six main themes, namely, the overall rate of soft drink consumption, the rate of consumption in different age groups, the diseases associated with soft drink consumption, the factors that influence soft drink consumption, the public health interventions designed to reduce the health burden of soft drink consumption, and the qualitative papers conducted on soft drink consumption. However, as we shall see, whilst the existing research is important, it provides a limited view of soft drink consumption because of its lack of investigation into the wider determinants of this phenomenon. For this reason, the review then moves onto a broader consideration of soft drink consumption and focuses on key evidence around the six themes mentioned above. This review focuses on key evidence rather than trying to comprehensively cover everything.

1.1.1 Writing the literature review

This section is divided into two parts. The first part presents a brief introduction to the concept of the narrative review as the literature review in this thesis is considered a narrative review. The second part describes the process I followed to write the literature review, including the databases I searched, the search terms I used and the inclusion and exclusion criteria I applied.

1.1.2 Introduction to the concept of the Narrative review

The terms ‘literature review’ and ‘narrative review’ are frequently used to refer to the same concept (University of Alabama at Birmingham, 2020). Therefore, in my discussion below, I will be flexible in using these terms and will use both terms interchangeably. Literature reviews can be found in different domains (Booth et al., 2016). One of the areas where they can be found is the publications field (Booth et al., 2016). Additionally, literature reviews are widespread in education, in particular in dissertations and theses (Booth et al., 2016). Literature reviews have two primary goals: to summarise the previous studies on a subject and to provide some conclusions about the topic (Cronin et al., 2008).

Booth et al. (2016) outline many reasons for and aims of conducting a literature review. One of the goals of a literature review is to offer a solution for apparent disagreements between the existing studies on a certain topic (Booth et al., 2016). Literature reviews also aim to outline what research has already been done in a certain area so other researchers will not repeat the same research (Booth et al., 2016). Additionally, Knopf (2006) outlines many advantages of

literature reviews. Knopf (2006) argues that literature reviews can generate new visions and aims about the research that will be undertaken. Moreover, they assist researchers to position their studies among available works and therefore enable researchers to anticipate the findings of their upcoming studies (Knopf, 2006). Conducting a literature review also allows researchers to identify any gaps in knowledge in their field (Knopf, 2006).

In the following, I will discuss the disadvantages of narrative reviews. The approach researchers take when searching for literature in narrative reviews can include ‘selection bias’ (Pae, 2015). In narrative reviews, the researcher’s position can influence the interpretation of the existing literature and can cause bias (Pae, 2015). Also, the researcher’s level of experience can impact the literature inclusion criteria they apply when conducting a narrative review (Pae, 2015).

1.1.3 The literature writing process

This section discusses the core elements related to my literature review. These are the databases used, the search terms, the inclusion and exclusion criteria applied and finally some details about the process of writing the literature review.

I have used many databases to access the literature around soft drink consumption for my literature review. These databases are as follows:

Google

Google Scholar

Web of Science

PubMed

StarPlus - University of Sheffield Library (University Database)

Usually, I started my search on Google because Google gives broad search results and can guide me to published academic papers and grey literature such as reports and government documents. When I wanted to find academic articles, I usually started with Google Scholar then used other databases. Additionally, I used the StarPlus database as part of my search for relevant literature. StarPlus was very beneficial as it allowed me to access online papers and books.

I have used several search terms to find work relevant to soft drink consumption. It is important to note the terms I used developed and changed over time as I read more on the topic. For example, I discovered through my reading that the terminology around the concept of soft drinks is inconsistent in the existing literature and many terms are used to indicate this concept. Thus, in the beginning, I used the term “soft drinks” but later I used both “soft drinks” and “sugar sweetened beverages” because I learnt during my search that the term “sugar sweetened beverages” can include soft drinks. Also, over time, I found that the use of the term “sugar” was beneficial for the search as it helped me to access government documents that discuss sugar in general and soft drinks in particular. In the following, I will outline the search terms that I have employed to find literature on soft drink consumption.

Soft drink*

Soda*

Beverage*

Sugar sweetened beverage*

Sugar

The main inclusion criteria applied in the literature review were that the included literature should discuss drinks containing sugar other than fresh juices, tea, coffee and alcohol. However, if the literature included soft drinks and one of these other beverages, such as fresh juices, I included it in the review as it would be relevant. The same criteria applied when it came to artificially sweetened beverages. I did include papers on artificially sweetened beverages when the paper also, for example, examined sugar sweetened beverages.

In the literature review, I have cited mainly published academic articles and grey literature in the form of government reports and documents on soft drink consumption. I accessed the academic articles through databases such as Google, Google Scholar, Web of Science, PubMed and StarPlus.

In terms of government reports and documents on soft drink consumption, I was able to access these mainly through Google. Also, at the beginning of my PhD studies, my primary supervisor provided me with a report (one of those listed below), which I used to access further governments reports on soft drink consumption, namely:

Department for Environment, Food and Rural Affairs (2003; 2005; 2008; 2008a; 2012; 2017) and National Statistics (2020). From this first report, I was able to find others using various strategies such as tracking down the report's references and searching for the same references for different years as many of these reports are published regularly.

1.1.4 Key details about the literature review writing process

When I started my PhD, I did not start by immediately writing the literature review. However, I started to read extensively about soft drink consumption in general. As mentioned above, I read articles and government reports on soft drink consumption. To start with, my aim was to focus on the background provided by these papers to increase my knowledge of soft drink consumption. Over time, I noticed five vital topics in this area: the level of soft drinks consumption, consumption among different age groups, the diseases associated with soft drink consumption, the factors that drive people to consume soft drinks and interventions to reduce soft drink consumption.

One thing that helped me to develop and conduct my literature review was reading and preparing what I was going to write before meeting my supervisors. Then, when I met my supervisors, I showed them what I was aiming to write in my literature review and they gave me their feedback. This helped me a lot to progress in writing the literature review. It is important to note that I have mainly used government reports on soft drink consumption when discussing the level of consumption in the UK and the age ranges of those who consume soft drinks. I also use government reports and documents when I discuss the interventions associated with soft drinks in the UK. In contrast, I cite mainly from academic papers when I discuss the other themes identified such as the diseases associated with soft drink consumption and the factors that drive people to consume soft drinks. Reading the government reports on soft drink consumption influenced the direction of the literature review. This is because this reading prompted me to take the position that excessive sugar consumption is unhealthy and there is a need to reduce levels of soft drink consumption among the public. As such, I wrote a section in my literature review about the association between excessive consumption of sugary soft drinks and general and oral health conditions (section 1.4).

Taking the position that excessive sugar consumption is unhealthy also influenced my study aim and objectives, which are designed to understand more about soft drink consumption (sections 2.13 and 2.14). Thus, the data I have collected is intended to explore the phenomenon

of soft drink consumption (section 4.2, 4.3 and 4.4). Also, it is worth mentioning that one of the materials I read about sugar was a book my primary supervisor suggested to me by Mintz (1986), *Sweetness and Power: The Place of Sugar in Modern History*. I read this book at the beginning of my PhD during the literature review. This book has benefited me by giving me an idea of the history of sugar. However, the history of sugar is not the focus of the literature review nor my study.

It is important to acknowledge that the process of writing the literature review was not systematic and therefore I cannot be certain that I have included all the relevant studies. However, regarding my literature search, I undertook several steps to optimise the search process and minimise the chance of overlooking relevant literature. This included using several databases. Also, I found sources by reviewing the references from the literature that I read. Moreover, to enhance the process of searching for relevant literature, I focused on the topic of soft drink consumption and chose the appropriate search terms. I also updated my search terms throughout the study, as mentioned in section 1.1.3. Additionally, I used reliable sources. For example, as mentioned earlier in this section, when I discuss levels of soft drink consumption, I cite from government reports on this issue.

1.2 Consumption of soft drinks

This section is divided into two sub-sections dealing with the consumption of soft drinks. First it briefly outlines the global consumption of soft drinks before it reviews the consumption of soft drinks in the UK.

1.2.1 Global consumption of soft drinks

The global consumption of Soft drinks has increased significantly over the past few decades (Brownell et al., 2009). The Food Agriculture Organization of the United Nations reported that beverage consumption in the form of soft drinks, coffee and tea increased by approximately 20 percent worldwide between 1961 and 2003 (Wolf et al., 2008). A more recent study found that the average consumption of soft drinks per individual per year across 97 countries increased by 1.9 gallons from 9.5 in 1997 to 11.4 gallons in 2010 (Basu et al., 2013).

1.2.2 Consumption of soft drinks in the UK

In the UK, the consumption of ready-to-consume soft drinks clearly increased before the new millennium (The National Food Survey Committee, 2001). The average daily intake of ready-to-consume soft drinks had reached 500 gm per individual by 1995 (The National Food Survey Committee, 2001). Between 1995 and 1999, the intake of ready-to-consume soft drinks slightly reduced; however, by 2000 it had increased again by 13 percent (The National Food Survey Committee, 2001). These findings were replicated by the National Statistics, Department for Environment, Food and Rural Affairs (2003), which found that the daily intake of soft drinks was around 227 millilitres per individual in 1996/97, 216 millilitres per individual in 1998/99, and 227 millilitres per individual in 1999/2000 (National Statistics, Department for Environment, Food and Rural Affairs, 2003). Table 1 contains an overview of the average daily consumption of soft drinks in millilitres per person in the UK from 2001 to 2018.

Table 1. Average consumption of soft drinks (millilitres) 2001-2018

Year	Consumption per person per day in millilitres
2001/2002	249.1
2002/2003	251
2003/2004	276.1
2004/2005	261.7
2005/2006	245.4
2006	258.1
2007	240.9
2008	240.3
2009	239.7
2010	245.4
2011	232.9
2012	233.3
2013	237.7
2014	220.9
2015	218.7
2016/2017	229.7
2017/2018	215.4

Source: Data extracted from Department for Environment, Food and Rural Affairs (2003, 2005, 2008, 2008a, 2012, 2017) and National Statistics (2020).

According to the data presented in Table 1, the average daily consumption of soft drinks per individual was 240.95 millilitres between 2001 and 2018, ranging from 276.1 to 218.7 millilitres. The highest consumption was recorded in 2003/04, while the lowest was in 2015. As the data presented above indicates, there was a slight decrease in the consumption of soft drinks from 2001 to 2018. A report published by the Public Health England (2016) stated that consumption of Soft drinks in the UK reduced in general among most age ranges between the periods 2008/09-2009/10 and 2012/2013-2013/2014, however, the identified reduction was not significant (Public Health England, 2016). To get a good idea of the significance in the reduction in soft drinks consumption that was observed between 2001 to 2018, it is important to understand that, for example, according to Coca-Cola (2017), 100 millilitres of coca cola contains around 10.6 gm of sugar. As such, if the average daily intake of soft drinks for each

individual is 240.95 millilitres, the amount of sugar consumed by each individual would be around 25 gm per day from soft drinks alone. This consumption, in combination with the intake of the other sugars that are present in the foods people consume on a daily basis entails that total sugar consumption is very high and exceeds government guidelines on the recommended daily allowance. For example, according to government figures, people who are over the age of 11 should limit their free sugar to around 30 gm per day, while children younger than 11 should consume less than this amount (National Health Service, 2017). It is also important to note that the data presented in Table 1 has not been categorised according to age range. There is every possibility that the sugar consumption of some age groups is far in excess of government guidelines. For example, according to the National Health Service (2017), the current free sugar intake in the UK is double the recommended levels for the general population and triple those targeted at people aged between 11 and 18.

One study examined how the consumption of soft drinks has increased in the UK over the course of three years: 1986/1987, 2000/2001 and 2008/2009 (Ng et al., 2012). The results revealed that adults who were aged between 25 and 64 increased their average daily intake of sugar-sweetened beverages in the form of sodas and fruit drinks from 113 kilojoules per day in 1986, to 155 kilojoules per day in 2000, and 209 kilojoules per day in 2008/2009 (Ng et al., 2012). For the group who were aged between 4 and 18, an increase from 285 kilojoules in 1997 to 318 kilojoules has been identified in 2008/2009 (Ng et al., 2012). It is worth noting that the findings of Ng et al. (2012) are not in complete agreement with the data presented in Table 1, especially in terms of the sugar consumption of adults who are aged between 25 and 64. For example, Ng et al. (2012) reported that the intake of SSBs increased between 2000 and 2009, while Table 1 indicates that soft drink intake slightly reduced between 2001 and 2008. This conflict could be attributed to the fact that the data that was employed by the two studies were not consistent. For example, the two studies differed in terms of the age ranges, what constituted sugar-sweetened beverages, and what the study measured. This is a common phenomenon in studies of this nature. For example, some previous studies have examined the intake of fruit juice separately from soft drinks. Age ranges among studies have also varied significantly, as some employ a broad age range of 4-18 while others treat people aged 11-18 as a separate category. These inconsistencies mean that it is difficult to compare the findings related to the intake of soft drinks across studies. However, regardless of the variations in findings, all studies agree that, overall, soft drink consumption is beyond recommended levels. Other work, for example, the National Diet and Nutrition Survey (NDNS) conducted between

2012 and 2014 and found that non-milk extrinsic sugar (NMES) remains high among most age ranges in the UK (Public Health England, 2016). The NDNS was conducted from the perspective that NMES represents a good indicator of free sugar consumption, however, undoubtedly, free sugar consumption will always be less than NMES consumption (Public Health England, 2016).

Soft drinks are important because, according to Public Health England (2016), they are the main contributor to the amount of NMES that are consumed daily in the UK. Based on the data presented by the NDNS, between 2012 and 2014, soft drinks represented the highest or second highest contributor to the total amount of NMES that are consumed on a daily basis by people of the following age ranges: 4-10, 11-18, 19-64 (Public Health England, 2016). In the other age groups, soft drinks were within the top five contributors to the amount of NMES consumed each day (Public Health England, 2016). At one point, the UK government recommendations indicated that NMES should be limited to 11 percent of the total energy intake per day (Public Health England, 2016), however, more recently, the Scientific Advisory Committee on Nutrition (SACN) reduced this to 5% (Scientific Advisory Committee on Nutrition, 2015). According to the NDNS data, between 2012 and 2014, people in the age groups 1.5-3, 4-10, 11-18 and 19-64, all exceeded both the current recommended limit of daily intake of NMES of 5% and the previous recommendations of 11% (Public Health England, 2016).

1.3 Rate of soft drinks consumption among various age groups

The previous section focused on the general rate of soft drink consumption in the UK without properly taking into consideration differences between age groups. Although there were some conflicts in findings related to soft drink consumption, all the studies and surveys were in agreement that the consumption of soft drinks is high and exceeds the recommended level. This section will examine the rate of consumption across different age groups and evaluate which age group consumes the highest number of soft drinks. The results of this analysis will help the decision about which population to focus on in this study.

According to the results of a 2012-14 survey, the consumption of soft drinks in the UK was highest among the 11-18 and 19-64 age groups (Public Health England, 2016). The survey findings revealed that the average daily intake of soft drinks that were not low in calories was 212 gm for those in the 11-18 age group and 132 gm for those aged between 19 and 64 (Public Health England, 2016). An important point that should be considered is that, although the 19-

64 age group consumes high numbers of soft drinks, the UK data indicates that they consume less than the 11-18 age group, as described above.

However, the way in which these age ranges have been determined is very problematic. Specifically, the 11-18 age range covers a period of 7 years, while the 19-64 age range covers 45 years. As such, any comparison between these age ranges is unreliable because it is possible that someone who is aged 19 will behave very differently to someone who is aged 60. The comparison would be more valuable and appropriate if the data were presented such that the 19-25 age range was compared with the 11-18 age range. Therefore, it would be better to divide the 19-64 age range into subgroups, for example, 19-24, 24-35, 35-50 and 50-64. In such cases, it is highly likely that the 19-24 age group will have a high rate of soft drink consumption that is closer to that of the 11-18 consumption and very different to the consumption of the 50-64 year-old population. That is why it's not appropriate to compare the soft drink consumption of the 11-18 age group with that of the 19-64 age group.

To expand on this point further, one study was conducted in 2003 that reported consumption of soft drinks that are not low in calories (Social Survey Division, 2003). The findings reveal that the consumption of these drinks, in both males and females, was clearly higher among the 19-24 age group than among those aged between 50 and 64 (Social Survey Division, 2003). This difference confirmed that treating the 19-64 age group as one large group can result in unreliable findings, as there is a huge variation in consumption between those aged 19-24 and those aged 50-64. As such, they should not be treated as one group because there is a significant difference between them. If we take another research that examine the rate of intake of caloric soft drinks among a group of British adults. We find that soft drink intake was higher across younger adults than it was among older members of the population (Gibson and Shirreffs, 2013). For example, the number of soft drinks consumed was more for the 19-35 age group than it was for the older group (Gibson and Shirreffs, 2013). On the other hand, studies that performed outside the UK report that the consumption of soft drinks among the 19-25 age group was higher than that of adolescents aged 11-18 (Block et al., 2013; Hattersley, 2009). Although these studies were conducted in the US and Australia and the findings cannot be generalised, at a minimum, they confirm that the 19-24 age group should not be underrated in terms of their consumption of soft drinks.

To conclude, adolescents and the group aged between 19-64 tend to drink the highest number of soft drinks of all the age groups, however, the group aged between 11-18 consumes the

highest number of soft drinks followed by the 19-64 age group. However, if the 19-64 was divided into subgroups, the 19-24 group would show a high number of soft drinks consumed and close to that of the adolescent's level of consumption, or potentially even higher.

1.4 The diseases associated with soft drink consumption

The previous sections discussed the rate of soft drink consumption in the UK and identified which age groups consume the highest number of soft drinks. This section will highlight the adverse health effects and consequences of consuming high quantities of soft drinks in order to justify the urgent need for this study.

Before we start talking about the association between soft drinks and diseases, it is important to note that some of the studies described in this chapter referred to sugar-sweetened beverages (SSBs) in general, including soft drinks, as opposed to focusing on soft drinks in isolation. This is not a problem as soft drinks belong to the category of sugar-sweetened beverages. As such, the reference to SSBs in this chapter can indicate soft drinks. The general and oral health consequences of consuming a high number of soft drinks are clearly outlined in the existing literature (Popkin, 2012). Frequent consumption of soft drinks has been linked with obesity, type 2 diabetes, heart disease, dental decay and dental erosion (Schulze et al., 2004; Hu a& Malik, 2010; May & Waterhouse, 2003; Tahmassebi et al., 2006). Each of these is discussed below.

The following sections will present a review of the data on the association between soft drinks and the abovementioned health conditions. they will be divided according to the different study designs used. For example, the next few sections will discuss the association between obesity and soft drink consumption according to different study designs. I will then repeat this process to examine the evidence of the link between soft drink consumption and other health conditions. It is important to note that the following sections present key findings from existing literature, however, a detailed critique of this literature will be discussed later in order to reduce duplication.

1.4.1 The link between the consumption of soft drinks and obesity

A summary of the evidence related to the link between sugar-sweetened beverages and weight change will be presented in this section, followed by an analysis and critical appraisal of this evidence. Before beginning a review of the existing research, it is important to point out that

the term weight change has been employed in some parts as opposed to obesity. The reasons for this will be explained later in the literature review (section 1.4.1.4)

1.4.1.1 Systematic review and meta-analyses that describe the link between the consumption of soft drinks and obesity

A systematic review and meta-analysis of 88 studies of different designs, including cross-sectional, cohort, and intervention studies, reported a positive link between soft drink consumption and weight change (Vartanian et al., 2011). This was in complete agreement with an earlier meta-analysis that was performed by Malik et al. (2009), which concluded that there is a positive relationship between the consumption of sugar-sweetened beverages and an increase in body mass index.

1.4.1.2 Cohort studies that describe the link between the consumption of soft drinks and obesity

Schulze et al. (2004) conducted a large prospective cohort study to investigate the relationship between sugar-sweetened beverages and weight change, and sugar-sweetened beverages and type 2 diabetes. In terms of examining the weight change, a total of 51,603 women were included in this cohort study, which ran over a period of eight years (Schulze et al., 2004). Baseline measurements were taken in 1991, and then further measurements were taken two times at four-year intervals (Schulze et al., 2004). After adjusting for the variables, the results revealed that the weight of the women who increased their consumption of sugar-sweetened beverages increased more than those who did not (Schulze et al., 2004).

Another cohort study aimed to examine the link between weight gain and an increase in the intake of sugar sweetened beverages (Berkey et al., 2004). More than 10,000 participants were recruited who were aged between 9 and 14 (Berkey et al., 2004). Baseline data was established including their weight and data related to their consumption of soft drinks (Berkey et al., 2004). Two follow-up sessions were conducted: One after one year and the second after two years. The results revealed that there was a positive link between the consumption of soft drinks and weight gain (Berkey et al., 2004). Ludwig et al. (2001) conducted a longitudinal study among participants aged around 11 years who were randomly selected from schools in Boston. Baseline measurements were taken at the beginning of the study, and follow-up measurements were collected after 19 months (Ludwig et al., 2001). The youth food frequency questionnaire was employed to investigate the participants' consumption habits (Ludwig et al., 2001). The

results revealed that, after the adjustment of other variables that might affect the results, obesity frequency and body mass index were increased in accordance with an increase in the intake of sugar-added beverages (Ludwig et al., 2001).

1.4.1.3 Intervention studies that describe the link between the consumption of soft drinks and obesity

A randomized clinical trial recruited 318 obese or overweight participants who consumed more than 280 calories from sugar-added beverages per day (Tate et al., 2012). The participants were divided into three groups: One control group and two intervention groups (Tate et al., 2012). The caloric beverages consumed by the people in the first intervention group was replaced with diet beverages (sugar free), while the second intervention group consumed water as opposed to caloric beverages (Tate et al., 2012). The results revealed that, after six months of follow up, both the interventions groups showed weight loss and a reduction in waist measurements (Tate et al., 2012). Ebbeling et al. (2012) conducted a trial among 224 participants (adolescents) who frequently consumed sugar-sweetened beverages. The participants were assigned to two groups: An intervention and a control (Ebbeling et al., 2012). The intervention group replaced their caloric beverages with non-caloric drinks, such as water, and the control group did not change their consumption habits (Ebbeling et al., 2012). After one year, the participants in the intervention group exhibited a significant reduction in their body mass index (Ebbeling et al., 2012). Another follow up was performed after the second year, during which there was no intervention. Although the participants in the intervention group gained weight during the second year, their weight gain was less than that of the control group, however, the difference in weight gain was not significant (Ebbeling et al., 2012).

1.4.1.4 Analysis and critique of studies describing the link between the consumption of soft drinks and obesity

All the studies described above aimed to examine the link between the consumption of sugar-sweetened beverages and weight change, however, the component of their measurements differed from one study to another. For example, one study focused on soft drinks while another focused on sugar-sweetened beverages including coffee with sugar and other sports drinks. This is not a problem as the main objective of the analysis is to identify whether there is a link between the consumption of beverages that contain sugar and weight change. Originally, studies were concerned with identifying the extent to which there is a link between the

consumption of sugar-sweetened beverages and obesity. However, it is very difficult to design a study to detect if regularly drinking sugar-sweetened beverages can result in *obesity* or not, as this may require a cohort study or intervention study that is performed over a long period of time. Achieving this would be challenging. As a consequence, authors may try to find a ‘proxy’ measure for obesity, such as weight change or increase in body mass index, as this would be an indicator of a long-term risk of obesity.

In the above-mentioned evidence, cohort and intervention studies clarified that exposure (to sugar-sweetened beverages) leads to a specific outcome (weight changes) as these two types of studies are analytical in their nature and can indicate causality. As such Hu (2013) has argued that based on evidence of this nature, it can be concluded that the link between sugar-added beverages and weight changes extends beyond an association, it is a causal relationship. Hu (2013) claimed that cohort studies and randomized clinical trials in the field of sugar-sweetened beverages and weight changes indicate that there is a causal relationship between the two variables as these studies clearly found that an increase in sugar consumption can lead to weight gain. Hu (2013) went on to conclude that reducing the consumption of sugar-sweetened beverages will reduce the prevalence of obesity in society. Hu (2013) reported that there is no need to wait until the relationship between the consumption of sugar-sweetened beverages and weight change is proven 100% because this risks a further increase in obesity. However, in their study, Te Morenga et al. (2013) state that it is difficult to conclude from the findings that reducing sugar consumption will lead to a decrease in obesity. Nonetheless, they advise reducing sugar consumption because the findings indicate a fast increase in weight gain after sugar consumption.

The Bradford Hill criteria can be, to a certain degree, helpful to examine the link between the consumption of sugar-sweetened beverages and weight change in more detail. These criteria consist of several points and is designed to examine the link between two variables (Hill, 2015). The first criteria relates to the strength of the link between the two variables that are being examined. The stronger the association between the two variables, the more likely a causal relationship exists (Hill, 2015). The second criteria relates to the consistency of the findings about the two variables in existing studies and papers. For example, if most of the studies in the literature indicate that the two variables are associated and these studies were performed by different researchers in different countries at different times, it is more likely that there is a causal relationship between the two variables (Hill, 2015). The third criterion that examined the causal relationship is temporality. Temporality refers to situations in which studies find that

one variable precedes the other; as such, it causes it (Hill, 2015). A biological gradient, or the dose-response relationship as it is also known, is one of the most important of the Bradford Hill criteria. The dose-response criterion refers to situations in which the increase in one variable directly leads to an increase in the second (Hill, 2015). Furthermore, the Bradford Hill criterion indicates that the biological explanation should be logical and reasonable between the two variables as this is important when attempting to examine the link between them (Hill, 2015). The last two criteria that are designed to examine causal relationships are coherence and the availability of experimental evidence. However, it is important to note that applying the above criteria to the link between sugar-sweetened beverages and weight change will not give a decisive answer.

But, in terms of the strength of the association between sugar-sweetened beverages and weight change, a positive association has been reported. For example, the above-mentioned studies by Vartanian et al. (2011), Malik et al. (2009) captured this positive association. Finally, as we have seen, the above studies suggest a probable risk that sugar might cause obesity, however, it is difficult to be certain about the link between soft drink consumption and obesity. At the end. Te Morenga et al. (2013) tend to advise reducing sugar consumption as it can lead to rapid weight gain.

1.4.2 The link between the consumption of soft drinks and dental caries

The association between sugar and caries has been examined across a wide range of studies, and they are all in common agreement as to the role that sugar plays in the development of caries (Daly et al., 2013). The available studies on sugar and caries vary in their designs (Gustafsson et al., 1954; Harris, 1963; Sreebny, 1982; Scheinin et al., 1975; Shaw, 1979; Koulourides et al., 1976; Grenby et al., 1989). The sections below present some of the existing evidence related to the role sugar plays as a causative factor of dental caries, followed by an analysis and critical appraisal of this evidence.

1.4.2.1 Systematic review that describe the link between the consumption of soft drinks and dental caries

Moynihan and Kelly (2014) conducted a systematic review of the studies that have been done on the relationship between sugar and caries to examine the effect of lowering sugar levels below 10% and 5%. Different databases were used for this study, including Medline and the Cochrane Database (Moynihan and Kelly, 2014). Moreover, the study was conducted

following the PRISMA guidelines (Moynihan and Kelly, 2014). In total, the Moynihan and Kelly (2014) review assessed 55 studies with various designs including intervention, cohort, and cross-sectional studies. Their research revealed a positive association between sugar intake and the development of caries among various age ranges.

1.4.2.2 Cross-sectional studies that describe the link between the consumption of sugar and dental caries

One cross-sectional study was conducted by Granath et al. (1978) that aimed to examine the association between dental caries and sugar consumption. Around 500 Swedish participants who were aged four years of age were recruited for this investigation (Granath et al., 1978). The results revealed that participants who consumed less sugar between meals exhibited less dental decay, regardless of whether the decay was buccal or proximal (Granath et al., 1978).

A further cross-sectional study aimed to examine the link between the availability of sugar in several countries and the prevalence of caries among children who were aged 6 and 12 years (Sreebny, 1982). The study was based on data that was gathered and collected by the World Health Organization (Sreebny, 1982). The results revealed that there is a clear link between the prevalence of caries among children who were aged 12 years and the availability of sugar in 47 countries (Sreebny, 1982).

Both the studies described above were cross-sectional, as such, they cannot establish if there is a causal relationship between sugar and caries. However, they should be of concern because they indicate that there is a correlation between the two factors and that this link should be investigated in more depth.

1.4.2.3 Longitudinal studies that describe the link between the consumption of sugar and dental caries

A longitudinal study was performed in Tristan da Cunha, a remote island in the Atlantic Ocean (Fisher, 1968). The researchers concluded that the prevalence of caries had increased among the population of this island after the opening of trade with outside countries (Fisher, 1968). As such, the diet of the population, which was free of sugar, had changed and is the main reason for an increase in dental caries (Fisher, 1968).

Another well-known longitudinal study, the Hopewood House study, compared the level of dental caries with the intention of identifying the effect of sugar on caries development (Harris,

1963). In the 1950s, children were recruited directly after birth and lived in a special house in Australia for ten years (Harris, 1963). The population of the house did not consume foods that contained high amounts of sugar (Harris, 1963). The results revealed that the children who lived in Hopewood house had fewer caries on average than children living elsewhere in Australia (Harris, 1963).

1.4.2.4 Human intervention studies that describe the link between the consumption of sugar and dental caries

A human intervention study was conducted by Scheinin et al. (1975) that is known as the Turku study. The aim of this study was to examine the incidence of caries after exposure to a diet that was high in different types of sugar; namely, sucrose, xylitol, and fructose (Scheinin et al.,1975). Around 102 participants were recruited and divided into three groups (Scheinin et al.,1975). One group was exposed to xylitol, the second was exposed to sucrose, and the third to fructose. The follow-up lasted for around two years (Scheinin et al.,1975). The results revealed that the incidence of caries was clearly high in the sucrose group, while xylitol was found to prevent caries (Scheinin et al.,1975).

Another common intervention study, the Vipeholm study, was conducted in mental illness hospital (Gustafsson et al., 1953). The aim of this study was to examine the effect of different types of sugary diets (different levels of stickiness and retention and differences in the frequency) on carries (Gustafsson et al., 1953). A total of 964 patients participated in this study between 1946 and 1951(Gustafsson et al., 1953). The participants were assigned to different groups: One control group and six intervention groups in which participants were exposed to one of the following: sucrose, bread, chocolate, caramel, toffees, and toffees (Gustafsson et al., 1953). The results revealed that sugar consumption affects the surface of the teeth and the cariogenic effect varies from one type of sugar to another, for example, bread has a lower cariogenic effect than retentive types of sugary foods (Gustafsson et al., 1953). The findings indicated that the frequency of intake is more important than the amount (Gustafsson et al., 1953).

1.4.2.5 Animal experiments that describe the link between the consumption of sugar and dental caries

Grenby et al. (1973) performed a study on 34 rats that were loaded with streptococcus bacteria and exposed to high amount of sugars in the form of sucrose and glucose over a period of five

weeks or eight weeks. Caries developed in both the sucrose and glucose groups, however, the incidence of caries development was higher among the subjects in the sucrose group (Grenby et al., 1973)

1.4.2.6 Enamel slab experiments that describe the link between the consumption of sugar and dental caries

Enamel slab experiments use enamel pieces attached to appliances that are placed in the human oral cavity and remain in the mouth for a period of time ranging from 1 to 6 weeks (Murray et al., 2003). The oral appliances that hold the enamel piece are exposed to different types of foods (Murray et al., 2003). At the end of the study, the enamel slab is removed and tested for any signs of demineralization or change in the enamel structure (Murray et al., 2003).

Koulourides et al. (1976) tested bovine enamel surfaces that were loaded intraorally into human oral cavities for one week. The results revealed that sugar is cariogenic, however, the cariogenic effect varies in terms of sugar type (Koulourides et al., 1976). For example, sucrose exhibited high carcinogenicity in comparison to other types of sugar (Koulourides et al., 1976).

1.4.2.7 Plaques ph experiments that describe the link between the consumption of sugar and dental caries

This type of study is employed to examine the change in pH across the plaque layer after exposure to different types of food, particularly sugar (Murray et al., 2003). A reduction in the pH of plaque means that the acidity has increased, leading to a favorable environment in which caries can develop (Murray et al., 2003). Studies of the nature can be performed in several ways (Murray et al., 2003). One involves removing part of the plaque layer from certain teeth to examine these parts of plaque outside the mouth (Murray et al., 2003). If the pH of the plaque layer drops after being exposed to certain foods, these types of food may be considered to be unhealthy for the teeth and may cause demineralization (Murray et al., 2003). Studies have proven that the extent to which the pH level in the mouth changes varies according to the type of sugar consumed; for example, pH drops more following exposure to sucrose than it does in response to lactose (Murray et al., 2003).

1.4.2.8 Incubation experiments that describe the link between the consumption of sugar and dental caries

Incubation experiments have been employed to test whether the bacteria that are found on the plaque layer have the ability to produce acid after fermenting carbohydrates (Murray et al., 2003). These experiments are conducted outside the mouth, for example, in a lab setting (Murray et al., 2003). The test examines the rate at which bacteria produce acid (Murray et al., 2003). If the acid production after fermenting a certain type of sugar is rapid, this means that this type of sugar exhibits a propensity to cause demineralization and then caries (Murray et al., 2003). These kinds of experiments have reported that sugar is a causative factor in the development of caries (Murray et al., 2003).

1.4.2.9 Analysis and critiques of the studies describing the link between the consumption of sugar and dental caries

The discussion of the existing research findings presented above is useful as it provides insights into whether the link between sugar and caries is a causal relationship or only association. Cross-sectional studies that have focused on sugar and caries have been unable to establish a causal relationship between sugar and caries due to the limitations of this type of study. The longitudinal studies that were described provided stronger evidence that sugar is the main cause of dental caries as the design of these studies made it possible to ascertain causality between sugar consumption and caries. Specifically, it was possible to verify the effect of sugar on teeth over a long duration following the adjustment for other variables. Intervention human studies provide the strongest evidence to confirm the role sugar plays in the development of dental caries because of the nature of these studies. However, it worth mentioning that these studies were unethical and are no longer permitted. Regardless, based on the findings of the intervention studies and longitudinal studies, we can report that there is a causal relationship between sugar consumption and caries. To confirm the role of sugar in dental caries, the Bradford Hill criteria that were described in the section related to the link between sugar consumption and obesity (section 1.4.1.4) will be employed within this section so we can review the relationship between caries and sugar consumption. In terms of the strength of the association, it is clear that a significant number of studies have provided evidence of the relationship between sugar consumption and caries. For example, according to Sreebny's (1982) study, which examined the association between DMF among children aged 12 years and the availability of sugar in 47 countries, found that 52% of the observed changes in DMF could be

attributed to the fact that sugar is available in these countries. This reflects the strength of the association between sugar and caries.

In terms of the concept of consistency among findings, the various studies described above, which employed different types of methodologies including cross-sectional studies, cohorts, human intervention, animal experiments, enamel slab experiments, pH plaque experiments, and incubation experiments, all indicated that sugar is a causative factor for dental caries. In addition, these studies were conducted in different places by different researchers and at different times. For example, the Hopewood House study in Australia concluded that the children who lived in the house who were exposed to low sugary food ended up with low levels of caries in comparison to the other children in the country (Harris, 1963). In addition, the longitudinal study that was performed by Tristan da Cunha concluded that, after opening the trade, the level of caries observed on the island increased (Fisher, 1968). In terms of temporality, all the studies described above found that caries developed after exposure to sugar. This link was particularly clear in the human intervention studies. For example, in the Vipeholm study, a baseline measurement of DMF was taken for the control group and the other intervention groups (Gustafsson et al., 1953). This measurement was taken before the exposure to sugar and the development of caries (Gustafsson et al., 1953).

In terms of the biological gradient of sugar and caries, the existing research indicates that there is a correlation between an increase in sugar consumption and an increase in caries. For example, according to the longitudinal study that was performed in Tristan da Cunha, the incidence of caries increased following the increase in sugar intake (Fisher, 1968). Likewise according to the Vipeholm study, the incidence of caries increased in response to an increase in the amount of sugar consumed, for example, when toffee dose increased, the caries showed a significant increase in the DMF (Gustafsson et al., 1953). This study also concluded that the frequency of sugar consumption is more important than the amount of sugar consumed (Gustafsson et al., 1953). When the frequency of sugar increased, the incidence of caries also increased (Gustafsson et al., 1953).

In terms of biological plausibility, caries is defined, as has been explained, as a kind of destruction that occurs on the surface of the tooth structure as a result of the acid produced by the bacteria in the mouth (Kidd and Fejerskov, 2016). The bacteria in the plaque layer can produce acid when processing the sugars that come from food and drink (Kidd and Fejerskov, 2016).

As I have mentioned previously, applying the above criteria to the link between sugar-sweetened beverages and dental caries will not give a decisive answer. But given the above-mentioned studies, we can conclude that sugar is an important factor in caries development and the link is very strong. Finally, the above-mentioned studies on dental caries are quantitative and based on the biomedical model, which examines the relationship between soft drinks and dental caries. While this approach is valuable, another approach is needed to investigate the wider social determinants of soft drink consumption.

1.4.3 The link between the consumption of soft drinks and dental erosion

Dental erosion is defined as the loss of the hard surface of the teeth due to the chemical effect of acid (Hattab and Yassin, 2000). Dental erosion can cause several problems, such as tooth sensitivity, difficulty eating, and lower aesthetic appeal (Linnett and Seow, 2001). Soft drink consumption has also been linked to dental erosion and is considered to represent one of the main causative factors of teeth erosion among children (May & Waterhouse, 2003). The debate of whether there is a causal relationship between soft drink consumption and dental erosion has been raised in many different studies (May & Waterhouse, 2003). The section below reviews the existing evidence related to the role soft drink consumption plays in dental erosion followed by an analysis of this evidence.

1.4.3.1 Cross-sectional studies that describe the link between the consumption of soft drinks and dental erosion

Jensdottir et al. (2004) examined the prevalence of dental erosion and sought to establish if there is a link between soft drink intake and dental erosion among 80 participants, of which 57 were adults, and 23 were gastroesophageal reflux patients. The questionnaire was distributed to all participants to gather information about soft drink intake (Jensdottir et al., 2004). The dental erosion of the participants was then determined through a dental examination (Jensdottir et al., 2004). This study had several aims and outcomes; however, in terms of the association between dental erosion and soft drink consumption, the results revealed that the participants who regularly drank Coca-Cola three times or more every week exhibited a three times higher risk of dental erosion than the other participants (Jensdottir et al., 2004). The results also revealed that participants who drank 1 liter or more of soft drinks (not only Coca-Cola) per week exhibited statistically significant more dental erosion (Jensdottir et al., 2004).

1.4.3.2 Case-control studies that describe the link between the consumption of soft drinks and dental erosion

A study that was conducted in the UK in the 1990s aimed to compare the types of diets consumed by three different groups (Moazzez et al., 2000). The case group consisted of children who exhibited dental erosion, the two control groups were formed of children with dental decay, and the control group consisted of children without dental decay (Moazzez et al., 2000). The results revealed that the case group consumed a lot more acidic beverages than those in the control groups (Moazzez et al., 2000). Another study aimed to examine the link between dental erosion, the level of pH in the oral cavity, and the beverages that the participants typically drank (Moazzez et al., 2000). At the beginning of the study, the adolescent participants were divided into two groups (Moazzez et al., 2000). The first group of participants consisted of people who exhibited dental erosion, while the second was formed of those without dental erosion (Moazzez et al., 2000). A questionnaire was distributed to all participants to collect information about their drinking habits (Moazzez et al., 2000). The results revealed that the participants who suffered from dental erosion consumed a statistically significant larger number of soft drinks (Moazzez et al., 2000).

Another study aimed to examine the link between dental erosion and dietary habits (Millward et al., 1994). Around one hundred children aged between 4 and 16 were recruited for this case-control study (Millward et al., 1994). The participants underwent a dental examination, following which they were divided into three groups based on the severity of the erosion they exhibited (Millward et al., 1994). The first group consisted of participants with severe erosion, the second group contained children with moderate dental erosion, and the third group of children exhibited mild dental erosion (Millward et al., 1994). The results of the study revealed that the children in the group with severe dental erosion consumed much higher numbers of carbonated and fruit drinks than those in the moderate group followed by the mild group (Millward et al., 1994).

1.4.3.3 Longitudinal studies that describe the link between the consumption of soft drinks and dental erosion

A total of 227 individuals aged between 13 and 14 years participated in Hasselkvist et al.'s (2016) longitudinal study. A dental examination was performed at baseline to assess the level of dental erosion the participants exhibited (Hasselkvist et al., 2016). Questionnaires and interviews were also conducted at baseline to gather relevant information related to the

participants' lifestyles and drinking habits (Hasselkvist et al., 2016). All these measurements were taken again at the follow-up, which was performed after around fifty months (Hasselkvist et al., 2016). The results revealed that dental erosion involved 35% of the 2566 surfaces of individual teeth and this was attributed to several factors, one of which was drinking acidic beverages between meals (Hasselkvist et al., 2016).

1.4.3.4 Analysis and critiques of the studies describing the link between the consumption of soft drinks and dental erosion

The studies described above were designed to investigate the link between the acids that are present in some beverages and dental erosion. However, the type of beverages that were the focus of the research varied from one study to the next. Some of the researchers used Coca-Cola and others soft drinks that contained high levels of acid. The fact that different beverages were the subject of the studies is not a problem within the context of the current study, indeed all of the drinks involved in the research described above can be categorized as soft drinks.

Studies on the link between the consumption of soft drinks and dental erosion vary in terms of the methodology they have employed. This is a good indicator that the link between these two variables is more than an association. Cross-sectional studies have identified that there is a correlation between soft drink consumption and dental erosion, while the longitudinal and case-control study reported that there is a causal relationship between soft drink consumption and dental erosion. A lot of the case-control studies that have been performed in this field have aimed to investigate the link between soft drink consumption and dental erosion. This may be for two main reasons. First, to examine the causality between soft drink consumption and dental erosion and second, because the outcome (dental erosion) needs time to develop to be identified after the exposure (soft drinks).

Finally, we can see that all the studies above on the link between soft drinks and various health conditions (section 1.4) focus on the individual only and use the biomedical model. They thus look for the causes of the diseases but overlook the wider determinants of soft drink consumption. This criticism will be illustrated in greater detail in section 1.5.6.

1.4.4 The link between the consumption of soft drinks and diabetes

There is some evidence that suggests that the consumption of a high number of SSBs on a regular basis is linked with type 2 diabetes regardless of obesity (Hu & Malik, 2010; Malik et

al., 2010). This section presents some of the existing evidence related to the link between the consumption of sugar-sweetened beverages and type 2 diabetes. The focus is on the better quality studies including systematic reviews and longitudinal studies. The sections below present some of the existing evidence related to the role sugar plays as a factor of diabetes, followed by an analysis and critical appraisal of this evidence.

1.4.4.1 Systematic reviews that describe the link between the consumption of soft drinks and diabetes

A systematic review of six longitudinal studies that was undertaken by Greenwood et al. (2014) aimed to test the link between the consumption of sugar-sweetened beverages/artificially sweetened beverages and the risk of type 2 diabetes (Greenwood et al., 2014). The meta-analysis revealed that there is an association between the consumption of sugar-sweetened beverages/artificially sweetened beverages and the risk of type 2 diabetes (Greenwood et al., 2014). Furthermore, this link is stronger in the case of sugar-sweetened beverages than it was with artificially sweetened beverages (Greenwood et al., 2014). Researchers found that people who regularly consume 330 ml per day of sugar-sweetened beverages had a 20% greater risk of developing type 2 diabetes than those who did not regularly consume these beverages (Greenwood et al., 2014). The findings of this study were largely in agreement with those of Malik et al. (2010), which found that individuals who consumed 1 to 2 servings of sugary drinks per day were at a 26% greater risk of developing diabetes than those who consumed 1 or less serving per month (Malik et al., 2010).

1.4.4.2 Longitudinal studies that describe the link between the consumption of soft drinks and diabetes

The eight-year-long longitudinal study conducted by Schulze et al. (2004) (mentioned previously in section 1.4.1.2) testing the link between the consumption of sugar-sweetened beverages and obesity had another outcome related to type 2 diabetes (Schulze et al., 2004). In terms of type 2 diabetes, 91,249 participants were included in this investigation. All of them were diabetes free at the baseline point. This study concluded that individuals who consumed large numbers of sugar sweetened beverages showed a higher susceptibility to be affected by type 2 diabetes. Indeed, the results were found to be statistically significant (Schulze et al., 2004). The findings of a further ten-year-long longitudinal study conducted by Palmer et al. (2008) were in agreement with that of Schulze et al. (2004). Palmer et al. (2008) studied around

44000 African women to test the link between the consumption of sugar-sweetened beverages and type 2 diabetes (Palmer et al., 2008). Like the previous study, Palmer et al. (2008), found a positive relationship between the two variables.

1.4.4.3 Analysis and critiques of the studies describing the link between the consumption of soft drinks and diabetes

The large number of participants included in the two longitudinal studies described above may be problematic, as there may have been a degree of bias in these studies. It would have been really difficult to follow up on such a large number of people, and some participants may have been lost at some point during the study, thereby undermining the research results. Moreover, recall bias could be expected during this type of study as a lot of information was obtained from individuals related to their consumption of sugar-sweetened beverages. Not all the participants may have accurately answered the questions that were asked as part of the research, they may have forgotten what they drank or provided false data due to their perspectives of what is socially acceptable.

The studies concluded by Schulze et al. (2004) and Palmer et al. (2008) would have been more generalizable if the participants included both males and females and were not limited to females only. The study by Palmer et al. (2008) was limited to African American women, and this makes it difficult to generalize the findings of the research.

On the other hand, a lot of studies have found that there is no correlation between the consumption of sugar-sweetened beverages and the risk of type 2 diabetes or that the link between the two variables is weak (Montonen et al., 2007; Nettleton et al., 2007). The main reason for this conflict in the findings of studies is that there are other related factors associated with a high intake of sweetened beverages; as such, an increase in the risk of type 2 diabetes may sometimes be attributed to these factors and sometimes to the high sugar amount in itself (Greenwood et al., 2014; Hu & Malik, 2010).

As such, if we apply the Bradford Hill criteria to determine the link between the consumption of sugar-sweetened beverages and the development of diabetes, it would be less applicable than that found for sugar and caries, for example, as the strength association between the consumption of sugar-sweetened beverages and the incidence of diabetes is present but it could be not as strong as that established in the case of sugar consumption and caries. While the research findings that support the link between the consumption of sugar-sweetened beverages

and diabetes are available and extensive, the findings are not always consistent. This does not mean that this association should be ignored. The link should be investigated in more depth, and further research in this area is needed, as many longitudinal studies have found a clear correlation between the two variables and presented reasonable and logical biological explanations for this link. For example, studies show that an increase in the level of glucose in the blood can lead to an increase in the secretion of insulin as a means of compensating for the additional hyperglycaemia in the blood (Popkin, 2012). This can undermine the process by which the body manages glucose and could lead to inflammation and the abnormality of beta cells (Dhingra et al., 2007; Malik et al., 2010).

The above section (1.4) of the literature review have focused on the role of soft drinks as a proximal cause of a range of health conditions. The next section will look at the wider social and behavioural determinants of soft drink consumption. This will highlight the determinants of soft drink consumption and open a discussion about the evidence supporting their effect and how they are conceptualised in the public health literature. The next section concerns the factors that might influence the consumption of soft drink.

1.5 Factors Associated with Soft Drink Consumption

This section will discuss the factors associated with soft drink consumption. The discussion will be supported by evidence from the existing literature, however, only brief critiques will be presented directly after citing evidence, while the major parts of the critiques will be discussed in detail later (section 1.5.6) at the end of this section under the heading: analysis and critique of the abovementioned factors of soft drink consumption. The reason for presenting the evidence in this way is to reduce repetition.

1.5.1 The link between unhealthy behaviours and soft drink consumption

The literature reveals a link between high levels of soft drink consumption and a variety of other unhealthy behaviours, including smoking, lack of adequate sleep, the tendency to eat unhealthy food, increased hours of television watching and a lack of physical activity (Scully et al., 2017, Park et al., 2012; Kvaavik et al., 2005). In other words, increased consumption of soft drinks is considered a good indicator of an unhealthy lifestyle (Kvaavik et al., 2004). Individuals who consume large numbers of soft drinks tend to consume less milk as the number of soft drinks that are consumed leaves no place for milk (Harnack et al., 1999). Furthermore, it has been reported that individuals who ‘strongly like’ the taste of water are less likely to

consume soft drinks compared with those who do not like the taste of water (Grimm, et al., 2004). Additionally, studies have found that, in general, adolescents who consume high numbers of soft drinks also eat junk food and snacks between meals (Scully et al., 2017; Park et al., 2012).

A large cross-sectional study based in Australia examined some of the factors associated with soft drink consumption among participants aged 12-17 years (Scully et al., 2017). More than 7,000 questionnaires were successfully completed and submitted by the research participants. The questionnaire was designed to obtain information about soft drink consumption as well as participants' demographic characteristics and behaviours associated with soft drink consumption (Scully et al., 2017). The results of the study reveal that individuals who tend to drink large numbers of soft drinks are more likely to eat junk food, to eat fewer servings of fruit, to watch more television and to sleep for less than 8 hours when compared with those who drink less soft drink (Scully et al., 2017). Another large cross-sectional study by Park et al. (2012) also aimed to examine behaviours associated with soft drink consumption. In this study, the researchers distributed a questionnaire to approximately 10,000 adolescents from secondary schools in the US in order to obtain information about soft drink consumption and soft drink related behaviours (Park et al., 2012). This study revealed a positive link between high soft drink consumption and low physical activity, frequent consumption of fast food and increased hours of television watching (Park et al., 2012).

Regardless of the limitations of this research, we can clearly see that these cross-sectional studies concentrated on the individual, particularly, his or her behaviours. For example, people who consume soft drinks are also more likely to eat healthier food and have lower physical activity. It seems here that the blame focuses only on the individual, although, if we look carefully, we can recognize that there is a hidden influencer other than the individual, the environment or social structure which may drive people to consume soft drinks. These may be the same influences that push people to eat unhealthy foods.

A variety of authors have attempted to explain the connection between soft drink consumption and different unhealthy behaviours. For example, Grimm et al. (2004) argue that the connection between increased hours of television watching and drinking large numbers of soft drinks may be explained by the fact that those who watch more television are also exposed to greater numbers of soft drink advertisements, which may cause higher levels of soft drink consumption. In contrast, other researchers have attributed the link between television watching and

increased soft drink consumption to the fact that television, and also computers, distract people and make them more likely to eat and drink more outside of meal times (Marsh et al., 2013). In terms of the link between high levels of soft drink consumption and a lack of sleep, this could be explained by the fact that some soft drinks contain sufficient amounts of caffeine to disrupt sleep among soft drink consumers, leaving them feeling exhausted the next day (Keast et al., 2007; Keast et al., 2011). All these interpretations about the connections between unhealthy behaviours and soft drink consumption fail to provide an adequate explanation for the increase in the prevalence and number of soft drinks consumed.

1.5.2 The link between parents' behaviour and children's soft drink consumption.

When we talk about parents' impact on children's soft drink consumption, it is worth mentioning related factors such as parents' attitudes toward soft drinks, parents' level of soft drink consumption, parents' rules on soft drinks in the home, the availability of soft drinks in the home and parental self-efficacy (Grimm, et al., 2004; Pettigrew et al., 2015; Van Lippevelde et al., 2013). All these factors can affect children and the family as a whole in regard to their soft drink consumption as these factors may encourage or limit soft drink consumption (Grimm, et al., 2004; Pettigrew et al., 2015; Van Lippevelde et al., 2013).

One cross-sectional study in the US aimed to examine main factors related to soft drink consumption among children aged 8-13 years (Grimm et al., 2004). Questionnaires were distributed to participants via the postal service and designed to investigate factors such as the Children' level of consumption, parents' level of consumption, friends' level of consumption and the availability of soft drinks in the surrounding environment, such as schools and homes (Grimm et al., 2004). Results revealed that children with parents who commonly consume large numbers of soft drinks have a higher tendency to consume soft drink than other children with parents who do not commonly consume soft drinks (Grimm et al., 2004). Another large cross-sectional study by Van Lippevelde et al. (2013) also aimed to investigate the determining factors associated with the consumption of soft drink among children (2013). This study examined soft drink consumption in several European countries, specifically, Spain, Slovenia, Greek, Switzerland, Norway, Hungary the Netherlands and Belgium. A questionnaire was distributed to both children and parents, with approximately 8,000 children surveyed and 6,500 parents (Van Lippevelde et al., 2013). The study reports a number of findings, but two important factors that were found to influence children's soft drink consumption. These were

high levels of soft drink consumption among parents and parents drinking soft drinks together with their children (Van Lippevelde et al., 2013).

These studies are cross-sectional in their designs and as such can't establish causation. In addition, as described above, many of them focus on individuals alone and ignore other important determinants. According to Watt (2007), an individualised approach in isolation cannot contribute to improved outcomes or help reduce health inequalities between populations. This will be described in more depth later (section 1.5.6).

There are many reasons explain why parents' regular consumption of soft drinks has an influence on their children's levels of consumption. First, parents who tend to consume high numbers of soft drinks are not able to limit their children's consumption of soft drink by applying rules on drinking soft drinks in the home as they already a soft drink consumer (Grimm et al., 2004). Second, parents act as "role models" for their children, they have the ability to regulate access to soft drinks and they can manage their children's actions and attitudes toward soft drink consumption (Grimm et al., 2004; Van Lippevelde et al., 2013; Patrick and Nicklas, 2005). Therefore, the terms 'social environment' or 'home environment' have been used to describe influencing factors on children's surrounding environment (Redondo et al., 2014, Van Lippevelde et al., 2013; De Bruijn et al., 2006). These explanations would not differ from previous ones that tended to interpret the link between unhealthy behaviours and soft drink consumption. They provide an inadequate explanation for the phenomenon. For example, if children are influenced by the home environment, which is determined by parents, we also need to consider who or what influenced the parent's behaviours.

Children who persistently ask their parents for soft drinks are also more likely to get what they want than children who do not 'pester' (Pettigrew et al., 2015). Parents tend to give into children's demands to make the atmosphere in the home more peaceful (Pettigrew et al., 2015). 'Pestering' behaviour has been shown to lead to an increase in soft drink consumption among children (Pettigrew et al., 2015). This could be attributed to the fact that when parents receive continuous requests from their children, they favour giving them what they want in order to avoid conflict (Pettigrew et al., 2015).

1.5.3 The impact of peer behaviour on soft drink consumption

A person's soft drink consumption can be easily influenced by the soft drink consumption of their friends, and the tendency to be affected by the consumption of one's friends is based on

the level of the individual's 'agreeableness' (De Bruijn et al., 2006). Agreeableness refers to some of an individual's characteristics, such as their friendliness and cooperativeness (Test, 2017). For example, if an individual exhibit a high level of cooperation and friendliness, they are more likely to be influenced by their friends' high levels of soft drink consumption and will then consume more soft drinks compared with individuals with low levels of cooperation (De Bruijn et al., 2006). The cross-sectional study by Grimm et al. (2004) discussed above found that children can be influenced by their friends' soft drink consumption. This is because the findings reported by Grimm et al. (2004) show a strong positive link between these two variables. Here, the association does not mean that there is a causation, and it is not a causation relationship. I will explore at a later date what might explain this excess soft drink consumption (section 1.5.6).

1.5.4 The influence of taste preferences and soft drink price on soft drink consumption

Researchers have argued that taste preferences are one of the most important drivers of soft drink consumption (Grimm et al., 2004). Grimm et al. (2004) reveal that soft drink consumers are more likely to drink 4,5 times when they "strongly like" the taste of soft drink as compared with consumers are less attracted to the taste. Several studies using a range of research methods support this finding, with participants reporting that taste is the main reason why they choose certain types of food in general (Glanz et al., 1998 Leksrisompong et al., 2013).

A qualitative study conducted in the US among students of an average age of 19, aimed to explore the drivers that made those students select a certain type of soft drink to consume (Block et al., 2013). Data was collecting from carrying out 12 focus groups across different colleges in the US (Block et al., 2013). This study revealed a number of themes. The most significant theme and determining factor of soft drink consumption was taste, following by price (Block et al., 2013). Research participants frequently expressed their support of the idea that taste is the most important factor in their soft drink choice (Block et al., 2013).

The pattern identified in these studies with respect to taste preferences and price on soft drink consumption follow the same pattern in previous studies. They provide an incomplete picture of why people consume high numbers of soft drinks.

1.5.5 The impact of marketing and advertising on soft drink consumption

There are several ways that companies adopt to deliver their advertising messages among children and adolescents (Story and French, 2004; Boyland and Whalen, 2015). These ways include television, the internet, clubs, children's toys, the cinema and pamphlets (Story and French, 2004; Boyland and Whalen, 2015). The main problem of food advertising is that it mostly markets unhealthy food, in particular, food or drink that contains high quantities of sugar, salt and fats, in which all are associated with health problems (Kraak et al., 2006).

A study conducted across 13 countries (the US, the UK, Austria, Australia, Denmark, Finland, France, Germany, Greece, Norway, Belgium, Sweden and Netherlands) examining the level of food advertising targeted to children finds that food advertising in the UK, the US and Australia were higher than in other mentioned countries, with about 200 food advertisements every 20 hours (Dibb and Tugend, 1996). It was also found that food advertisements constitute a significant proportion of all advertisements in most countries, while food advertisements constitute 40% of all advertising in 8 of the 13 countries examined (Dibb and Tugend, 1996). In addition, in the UK, most food advertisements promote unhealthy food that contain high levels of sugar and fat. The percentage of food advertisements in the UK that promote unhealthy food was found to be about 95% of all food advertisements (Dibb and Tugend, 1996). This finding supports previous claims reporting that most food advertising are for unhealthy foods that can lead to health problems in the long term (Kraak et al., 2006).

Regarding the effect of food advertising, a study has been conducted in the UK to examine the relationship between advertising and the types of food eaten by children (Hitchings et al., 1998). This study aimed specifically to investigate whether there is a link between the advertisement that children are able to recall and the food and drink that children consume (Hitchings et al., 1998). A total of 169 children aged 10-12 years were recruited for this study, of which only around 41 were included in the final analysis (Hitchings et al., 1998). Both the children and their parents were interviewed (Hitchings et al., 1998). The children were mainly asked about the advertisements that they could remember, while parents were interviewed to obtain data about the types of food that their children requested over a period of time (Hitchings et al., 1998). The results reveal that there is a positive link between the advertisements that the children can remember and the type of food they eat, and the link was strongest between advertisements they can remember and soft drinks consumed by children (Hitchings et al., 1998). Another cross-sectional study in the UK has examined the link between the food eaten

by children and television advertisements (Donkin et al., 1992). Around 500 parents of children aged 7 to 10 years of age participated in this study. The questionnaire distributed to participants was designed to gather information about different aspects of children's diets including the type of food they request from parents (Donkin et al., 1992). The results show that around 37% of the food that the children requested from their parents have been advertised on television over the research period (Donkin et al., 1992).

1.5.6 Analysis and critique of the above-mentioned factors of soft drink consumption

The Ottawa Charter was a conference held in Canada 1986. Its main focus was to discuss the important steps that should be taken in order to promote better public health (World Health Organization, 1986). One of the main ways to improve public health is to alter people's surrounding environment (World Health Organization, 1986). If we look carefully at the surrounding environment across almost all societies in regard to soft drinks, we can identify the factors that influence soft drink consumption. The surrounding environment can influence soft drink consumption in many ways. Soft drinks are available everywhere, in stores, schools, shopping centers and festivals, and are sold at very cheap prices in comparison with healthy beverages. A bottle of water is more expensive than many soft drinks. In these circumstances, it is reasonable to assume that the level of soft drink consumption will be elevated, particularly if we also consider the number of soft drink advertisements that are available across the surrounding environments.

An interesting study based in Norway aimed to identify the environmental and individual factors associated with soft drink consumption among adolescents in the country (Bere et al., 2008). Participants were recruited from more than 30 schools in Norway, and a questionnaire was distributed to gather information on soft drink consumption and related factors (Bere et al., 2008). In terms of environmental factors, the findings revealed that adolescents who are at schools that are located farther away from stores are less likely to consume soft drinks compared with adolescents who attend schools that are located close to stores (Bere et al., 2008). In addition, students who attend schools that tend to restrict and limit soft drink consumption are less likely to consume soft drinks compared with schools that apply no rules on soft drink consumption (Bere et al., 2008). This study confirms the argument that a person's surrounding environment will influence their consumption, and that we are considered in some ways victims of environment.

It is worth mentioning that studies regarding the factors that influence soft drink consumption are dominated by quantitative research methods, particularly cross-sectional studies designed to examine the link between factors and soft drink consumption. The cross-sectional studies on the factors associated with soft drink consumption tend to explain the relationship between the variables in an epidemiological way that is focused on risk factors for individuals. For example, people who eat unhealthy food are more likely to consume soft drinks. This approach tends to limit our understanding to a very narrow way of thinking and risks blaming individuals, whilst ignoring the fact that other influences might shape their behaviours. According to Watt (2007), to approach health problems from an individual perspective is no longer valid in isolation because of several limitations including the fact that this approach may have limited positive outcomes despite being very expensive (Watt, 2007). Kay and Locker (1996) indicated that the evidence for educating people about their dental health was limited. A second limitation of such individualised approaches is that most of the studies that focus on individuals' behaviours depend on a limited range of theory which on their own are not adequate in explaining individual behaviour (Riemsma et al., 2003). The third limitation, which has been mentioned previously, is that this approach considered that individuals can freely select their behaviours. However, Watt (2007) reported that this individual approach should be accompanied by another approach that may focus more closely on the roots and origin of the health problems. This new approach should address what is called the social determinants of health (Watt, 2007).

The social determinants of health are defined by the situations and circumstances in which the individuals find themselves lived in (World Health Organisation, 2017). For example, the places they are born and raised, their working conditions, and where they live as adults (World Health Organisation, 2017). These determinants have a significant impact on people's behaviours and, therefore, their health (World Health Organisation, 2017). Public health researchers and governments all over the world have started to focus on examining health conditions from the social determinants of health perspective (Daly et al., 2013). This approach has been known to deal with the “causes of the causes” by tackling issues related to social structure and conditions, and can find radical solutions for health improvements and reducing the inequality gaps between individuals of the population (Marmot, 2007; Watt, 2007). The actions that tend to deal with the social determinants of health are called “upstream actions” that may target countries' policies and regulations (Watt 2007). This previously explained theory about social determinants of health provides a proper explanation for high soft drink consumption. This new lens also provides a better understanding of the real phenomena related

to high soft drink consumption in the UK and other countries. Based on the new lens of the social determinants of health, an increased number of soft drink consumption is attributed to the social structure, working conditions, and surrounding environment rather than focusing on the individuals themselves. It is important to develop a good understanding of the availability of soft drinks, advertisements, and marketing messages related to these soft drinks, the industry as a whole, and the individuals who regularly consume these drinks because all these factors and determinants are outcomes of social structure. The key argument of this approach is that it is only through an understanding of the determinants of health that we will be able to identify and implement radical solutions that reduce soft drink consumption at a population level.

It is worth mentioning that qualitative papers that discuss the factors associated with soft drink consumption are rare, although qualitative methods to research factors and determinants can be convenient and appropriate. Qualitative methods are suitable to answer many research questions in this field. If a qualitative method is employed, it could report richer data and help to provide more detailed information when compared to quantitative methods. Most of the papers reviewed seek to explain factors associated with soft drink consumption in a quantitative way. However, usually in quantitative research it is necessary to establish a hypothesis first and to then test this hypothesis. For example, the hypothesis may be that individuals who consume large numbers of soft drinks spend a lot of time watching television because of the high number of soft drink advertisements they are exposed to. In such a study, soft drink consumers have no opportunity to express their opinions regarding what factors drive them to consume soft drinks as they are only able to answer pre-existing questions on a prepared questionnaire. However, giving the participants the chance to talk freely about the factors they feel are relevant may generate unexpected answers and provide insight into issues that can never be solved by quantitative research alone. This information can, for example, help us to figure out why people who consume high numbers of soft drinks spend a lot of time watching television, or why they engage in low levels of physical activity. Moreover, most unhealthy behaviours do not cause people to consume soft drinks, but these behaviours are typically observed together in the one individual. Listening to participants' reflections on soft drink consumption and how they make sense of why they drink soft drinks could fill in the gaps that have not been examined by the literature, and will help us to understand the root of this phenomenon and establish appropriate interventions.

In addition, research in this field focuses on children and adolescents even though, as I showed in section 1.3, young adults also consume large numbers of soft drinks. According to Risk Prediction (2017), adults aged 19 years in the UK have a life expectancy of around 60 years for men and 64 years for women. Understanding the context and the meaning of soft drink consumption related to adults above 18 is thus necessary to provide better interventions. The adult population is definitely a significant part of UK society and the influencing factors and determinants of their soft drink consumption will undoubtedly vary from those that influence children and adolescents.

1.6 Public health interventions that target soft drink consumption

This section concerns the various interventions that target soft drink consumption. It will be divided into two sub-sections. The first sub-section will outline various intervention methods that could be employed to reduce excessive soft drink consumption. The second sub-section will discuss the soft drink tax in the UK.

1.6.1 Interventions to reduce sugar consumption

Public Health England (2015) argues that there are several different strategies, actions and interventions that can reduce general sugar consumption. The first, that is usually suggested is focusing on what might influence individuals' high sugar consumption such as marketing and advertising across all different kinds of media whether it be TV, social media or other platforms (Public Health England, 2015). Other areas that should be looked at to reduce sugar consumption include price promotions as they might encourage the consumption of high-sugar foods and drinks and imposing a tax on soft drinks that contain high levels of sugar (Public Health England, 2015). The third strategy that should be considered is to reduce the sugar content of food and drinks that are widely available from shops, restaurants and so on (Public Health England, 2015).

In their paper, Block et al. (2010) discuss several other interventions that target soft drink consumption. They suggest strategies to reduce individuals' soft drink consumption that could take the form of school-based programmes. For example, supplying schools with bottled water instead of soft drinks in their vending machines (Lobstein, 2014). Another example is to impose regulations on the soft drinks consumed in schools and the soft drinks sold in school canteens (Lobstein, 2014). Additionally, Block et al. (2010) suggest other interventions that could be conducted at the population level, including point-of-purchase-based interventions. Across all

interventions, there has been a strong call for a soft drink levy by public health practitioners (Vargas-Garcia, 2017; Brownell et al., 2009).

1.6.2 Soft drinks and the implementation of a sugar tax in the UK

In 2016, the UK government stated that a tax on high-sugar soft drinks would be imposed in April 2018 to push soft drinks manufacturers to reduce the sugar content of their drinks (HM Treasury, 2016). No tax will be imposed on drinks with no added sugar, while a tax will be imposed on sugar-sweetened drinks that contain between 5-8 grams of sugar per hundred millilitres (HM Treasury, 2016). A heavier tax will be imposed on drinks with more than 8 grams of added sugar per hundred millilitres (HM Treasury, 2016).

Public Health England (2019) has produced a report about the progress of sugar consumption reduction in the UK. Of interest here is that between 2015 and 2018, there was a reduction of approximately 28.8% in the overall sugar content of the drink products subject to the sugar tax (Public Health England, 2019). Another important finding is that there has been an increase in the sales of lower-sugar drinks, which are not taxed, and a decline in the sales of taxed higher-sugar drinks (Public Health England, 2019).

1.7 Qualitative research papers that describe the factors associated with soft drink consumption

This section will highlight and present some of the qualitative studies that discuss the factors associated with soft drink consumption. These studies will be evaluated and critically appraised using the “standards for reporting qualitative research” suggested by O’Brien et al. (2014). O’Brien et al. (2014) reported twenty-one criteria that we can apply to critically evaluate any qualitative work and they presented explanations for each criterion to clarify how they can be successfully achieved (O’Brien et al., 2014). This section evaluates previous qualitative work that has focused on the factors associated with soft drink consumption. However, unlike the previous section (1.4 and 1.5), in this section, I will focus to a larger degree on critiquing each paper separately. This is mainly because these studies adopt a qualitative approach, an approach I intend to adopt in this thesis. Having a closer look at each paper will help me to craft effective research aims and objectives.

1.7.1 Qualitative evidence in the field of factors associated with soft drink consumption

Qualitative research from Australia has examined students' relationship with soft drinks through evaluating their attitude toward soft drinks, their soft drink consumption, and the understanding of the health related issues associated with soft drink consumption (Hattersley et al., 2009). Participants included 35 students from six different universities who were aged between 18 and 30 years old (Hattersley et al., 2009). The data collection was obtained through semi-structured focus groups, in which each session took one hour (Hattersley et al., 2009). Different points were discussed during the focus group, some of these included students' knowledge and attitudes toward soft drinks, their motivators for reducing soft drink consumption, and obstacles that they may face when they want to reduce or quit soft drink consumption (Hattersley et al., 2009). The findings revealed several themes: social drivers for consumption, environmental drivers, soft drink features, health-related issue, and tendency to reduce soft drink consumption (Hattersley et al., 2009).

Under the social drivers for consumption theme, Hattersley et al. (2009) find that some social locations including restaurants, bars, and malls drive the consumption of soft drink. These findings are valuable but miss some of the detail about the process of how these individuals are attracted to this kind of consumption. Also, Hattersley et al.'s (2009) findings reveal that environmental factors drive consumption, such as advertisements and the availability of soft drinks. These findings are again helpful but still miss some of the details, such as *how* advertising and availability can affect individuals. Moreover, Hattersley et al. (2009) separate social and environmental factors when they categorize their themes. Under the social factors theme, they mention socializing in restaurants, bars, and other locations. However, these contexts can involve environmental factors, too. In general, in the public health literature, the environmental and social factors affecting soft drink consumption are not clearly presented as they overlap.

Additionally, applying the “standards for reporting qualitative research” proposed by O’Brien et al. (2014) reveals several weaknesses. In terms of title, this study indicated that it was a qualitative study, however, there was no indication of whether the methodology was grounded theory, phenomenology, or ethnography. In fact, the research was not guided or based on a whole methodology, for example, grounded theory, phenomenology or ethnography. It was not therefore informed by theory, it was identified as a qualitative study because of the fact that it

involved a particular way of data collection and analyses. Furthermore, the author did not state which research paradigm was adopted, for example, whether the researchers applied constructivism or positivism.

However, information about the aims, methods, and findings were provided. In terms of the introduction, the study successfully mentioned previous work, gaps in research, and the justification and the urgent need for the study. For participants, the author clearly presented a good amount of information regarding the participants, their numbers, the reason to employ a focus group for data collection when compared to other methods. The researcher successfully clarified the number of participants in each focus group, and the date when the sessions were performed. There was also a statement about when the researcher decided to stop conducting the focus groups because of data saturation. The researcher mentioned that ethical approval was obtained. Regarding findings, this study revealed several themes and supported each theme with participants' quotations. Regarding the data analysis, this study presented a good amount of information regarding the analysis and the steps that have been taken such as recording, transcript, and the number of researchers who managed these issues. The discussion summarized the themes obtained from participants and compared the findings with previous work, concluding this part by evaluating the phenomena, providing recommendations, and describing the limitations of this study in an appropriate way. Finally, this study described issues related to funding and conflict of interest in a clear way.

To conclude, this research approach was appropriate in terms of the research objectives but there remains an inadequate understanding of the factors associated with excess soft drink consumption. A better understanding of this phenomena may be achieved if we explore behaviours within a natural setting by drawing on observational methods such as ethnography rather than planned interviews or focus groups in isolation.

Other qualitative work conducted in the US explored the drivers in students aged 19 to select a certain type of soft drink to consume and to explore students' opinions towards educational messages that discourage soft drink consumption (Block et al., 2013). Data was collected through 12 focus groups (Block et al., 2013). The transcript data that was obtained during the focus groups was analyzed using the immersion-crystallization method (Block et al., 2013). The study revealed several themes: taste is an essential factor, price is less important than taste, health perspective toward soft drinks, students' perspectives toward fresh juices, water, and educational messages (Block et al., 2013). The authors concluded that educational messages

that focus on students' perspectives might discourage and reduce their soft drink consumption (Block et al., 2013).

Again, drawing on the “standards for reporting qualitative research” mentioned by O’Brien et al. (2014), we find that the title of this study indicated that it was a qualitative study, however, there was no indication to the methodology that was employed. Like the previous study, this study was not theoretically driven, and there was no methodology section, only a description of the method of data collection and data analyses. In terms of the abstract, this study almost met the criteria as it mentioned the aims, methods, results, and conclusion. Regarding the introduction, the study indicated the problem, research gap, and need for the research but not in detail. Like the previous study, in this work, the research paradigms were not mentioned. In terms of sampling strategy and data collection, this study provided a clear explanation about how the participants were recruited, and the detail included the number of participants, number of focus groups, recording of data, and other related information. In terms of data management and data analysis, there was a good explanation that clarified the steps that needed to be taken in relation to coding, and data entry. In term of findings, this study presented the themes that were obtained from study participants and supported these themes by presenting participants’ texts and quotations. In the discussion, they did not compare the study findings with the previous work, and they did not mention study limitations. Finally, this study was ethically approved, and statements related to funding and conflict of interest were clearly described.

Like the previous study, this study was not without limitations. Although it is important to note that a primary finding revealed that taste is an essential factor in soft drink consumption, and this is an important point that needs to be taken into consideration. In fact, we should pay attention to the determinants that shape tastes and other associated individual factors such as price and habit. Their findings are valuable, but it would be useful if some studies explained in detail why there has been an increase in soft drink consumption.

Krukowski (2015) conducted a qualitative study in the US to examine the extent to which habit can influence soft drink consumption and to explore students' opinions of applying a 20% levy for soft drinks. Three focus groups were conducted involving 22 students, all of them were studying at one middle school in Michigan (Krukowski, 2015). This study used the theory planned behaviour as a framework to guide the three focus groups (Krukowski, 2015). Data analysis was conducted using NVivo software. The findings revealed several themes and subthemes that were obtained by the three focus groups (Krukowski, 2015). The six major

themes discussed students' soft drink consumption habits, their attitudes toward soft drink consumption, and their opinions of applying a \$20 levy on soft drinks (Krukowski, 2015). The remaining three themes included the three components of theory planned behaviour: behaviour intention, subjective norms, and perceived behavioural control (Krukowski, 2015).

Krukowski (2015) finds that while the research participants were aware of the side effects of the high sugar content of soft drinks, they still saw some advantages in consuming soft drinks in terms of taste and energy. This study also reports that the participants believed that a tax might play a role in reducing their level of consumption (Krukowski, 2015). Some of them believed that a tax of around 50% to 100% would prevent them from consuming soft drinks (Krukowski, 2015). When they were asked what they would do if the tax were 20%, their responses differed, with some saying that this tax would put them off soft drinks and others that it would not (Krukowski, 2015).

Regarding the environmental factors, Krukowski (2015) reports that the home environment was a concern among participants in terms of their consumption as the availability of the items and where they are kept may affect their consumption. This study also recognises the role of habit in soft drink consumption as the participants were aware that changing their routines may have impacted their soft drink consumption (Krukowski, 2015).

Unlike the previous two studies, this study theoretically driven, although the methodology was absent. Moreover, the research paradigms were not clarified by the authors. In terms of abstract, there was a summary of aims, methods, and findings. The gap in existing research and the need for the study was justified, and the authors stated that ethical approval has been obtained. The sampling strategy, recruitment process, and data collection methods were described clearly in general, including participants' characteristics, when focus groups were conducted, the recruitment methods, and other related issues such as parents' consent as the participants were adolescents. The themes were presented clearly, and the participants' texts were labeled and allocated to the relevant theme. In terms of discussion, this study provided a good summary of the themes and some detailed information and compared this with previous works. The authors reported the limitation of this study, indicating the generalizability of this study because the participants were recruited from only one school. Finally, the authors described issue regarding to funding, while statement related to conflict of interest was not mentioned.

Two other qualitative studies have explored the factors associated with soft drink consumption (Zoellner et al. 2012, Roth-Yousey et al. 2012). These studies were similar to those described above in regard to their qualities. Briefly, the two studies by Zoellner et al. (2012) and Roth-Yousey et al. (2012) successfully provided some details about data collection and analysis.

Zoellner et al. (2012) conducted a study to explore the consumption of sugar-sweetened beverages, water and artificially-sweetened beverages using the theory of planned behaviour. Data collection was done through 8 focus groups that included a total of 54 adults. The script used during the focus groups was guided by the theory of planned behaviour. Zoellner et al.'s (2012) findings were conceptualized according to the theory of planned behaviour. In terms of the sugar-sweetened beverages and under the attitude theme, they reveal that the participants' attitudes toward these drinks varied with some positive and some negative (Zoellner et al., 2012). Most positive attitudes were because of the taste and energy and vitamin content of these drinks (Zoellner et al., 2012). Cost was also a positive for some participants and a negative for others (Zoellner et al., 2012). Negative attitudes were commonly because of the sugar and caffeine content of the drinks (Zoellner et al., 2012). Under the perceived behavioural control theme, when asked what might act as an obstacle that could reduce their consumption of these drinks, the participants listed various factors such as availability, convenience, and cost (Zoellner et al., 2012).

Although this study reports some interesting findings, it is based on the theory of planned behaviour, which focuses on the individual. Some of the criticisms related to this theory are discussed later in this thesis (section 7.8). Also, the qualitative studies in the public health literature on soft drink consumption primarily depend on interviews and focus groups as a data collection method. However, it should be mentioned that collecting data using observations in a natural setting alongside interviews could perhaps produce new insights into this phenomenon.

Roth-Yousey et al. (2012) conducted a qualitative study to explore to what extent parents drive their 10-13-year-old children to choose healthy drinks through parental rules and expectations at home and in other settings. This study used a focus group to collect the data and constant comparative methods for data analysis (Roth-Yousey et al., 2012). It analysed different beverages including water, milk, and soft drinks (Roth-Yousey et al., 2012). The analysis revealed that parents are aware of the negative aspects of sugar-sweetened beverages, mentioning the sugar and caffeine they contain (Roth-Yousey et al., 2012). Aware of the

negative health effects of sugar-sweetened beverages, parents suggested that the consumption of these drinks by early adolescents could be achieved by managing environmental factors, i.e. controlling the accessibility and availability of these drinks (Roth-Yousey et al., 2012). However, parents were less sure about how to control consumption outside of the home (Roth-Yousey et al., 2012).

May and Waterhouse (2003) conducted a qualitative study on soft drink consumption to examine what can influence children's consumption of soft drink and to explore their understanding and awareness of the dental side effects of these drinks (May and Waterhouse, 2003). This study collected data through focus groups in which 32 children participated (May and Waterhouse, 2003). The results are divided according to age group and identify taste as an influential factor in soft drink consumption across all age groups (May and Waterhouse, 2003). However, the results also reveal that price and the availability of soft drinks can drive the consumption of soft drinks among older children, while young children's consumption is heavily influenced by their parents (May and Waterhouse, 2003).

Conducting a qualitative study on soft drink consumption is valuable as this approach is underused in this area. However, it is important to note that despite adopting a qualitative approach, this study primarily takes an individualistic approach as it focuses more on the individual, although it reveals some environmental factors affecting the individual. Furthermore, this study does not collect data through observation, making it difficult to capture the real picture of soft drink consumption in the natural environment.

On the other hand, all the qualitative studies mentioned in this section have only concentrated on downstream factors such as focusing on the individual, which is an appropriate approach as understanding the individual is a main factor to determine the best intervention, however, it would be more effective if this approach was accompanied by another method that can consider some of the more upstream factors that give attention to countries' policies, legislation, and regulations. Moreover, habit, price, and taste are essential themes of the previous research and most of the existing studies have examined these factors through using of focus groups or/and interviews, therefore, generate a good amount of data within this context. However, to understand price taste and habit in more depth, it will be important to capture these themes within the context in which they can be observed (e.g., place and time). In this respect an important contribution to this literature would be if observations accompanied with other data collection methods were to be added to what we already know.

To conclude, this section presented and critically appraised some of the previous qualitative work in the field of factors associated with soft drink consumption. By identifying the limitations, it should be possible to design and conduct a qualitative study that overcomes the limitations of previous studies.

1.8 The term “soft drinks” in the literature

This section discusses the inconsistent use of the term “soft drinks” in the literature. Different studies use different terms to discuss the same concept (soft drinks) such as “sugar sweetened beverages”, “soft drinks” and “artificially sweetened beverages”. This section presents my position on these differences in terminology and how I dealt with this issue when I reviewed and evaluated the literature.

In this paragraph, I provide examples of the terms used in different studies in the field of health research. In their qualitative study, Block et al. (2013) use the term “sugar sweetened beverages”. In contrast, Hattersley et al. (2009), in their qualitative research, use the term “soft drinks”. Finally, Zoellner et al. (2012) use both the terms “sugar sweetened beverages” and “artificially sweetened beverages” in their research.

Importantly, the focus of the research that uses the terms “soft drinks” and “sugar sweetened beverages” is the same, that is, they concern reducing the sugar content of these types of drinks. My research interest is also how to reduce sugar consumption so either of these terms is appropriate for this work. As such, when I evaluated the literature, I was flexible with the two terms “soft drinks” and “sugar sweetened beverages” and I included studies referring to both of them in my literature review. Ultimately, both terms indicate drinks that contain sugar making them both relevant to my research.

However, I was not interested in the term “artificially sweetened beverages” in my literature review because the main focus of this study is sugar in soft drinks, not artificial sweeteners. Nonetheless, I have included studies referring to artificially sweetened beverages many times in my literature review because they examine both sugar sweetened beverages and artificially sweetened beverages, making it relevant to this research. As I am interested in soft drinks that contain sugar and not interested in artificially sweetened beverages, this affected my search terms when I conducted the literature review. More details about my search terms can be found in section 1.1.3.

1.9 Summary of the literature review

High levels of soft drink consumption have been identified as the main reason for high levels of sugar consumption (Public Health England, 2015). These high levels of sugar consumption have both oral and general health consequences (Popkin, 2012) and are implicated in dental caries, dental erosion, obesity, and type 2 diabetes (Schulze et al., 2004; Hua and Malik, 2010; May and Waterhouse, 2003; Tahmassebi et al., 2006). The factors associated with soft drink consumption are various and diverse and have been examined primarily using quantitative research methods.

Existing research has adopted an individualistic focus, highlighting factors that affect individuals that are associated with soft drink consumption at the expense of exploring the role of social context. Where qualitative studies have been conducted, these have pointed the way towards context and habit in particular, without examining these aspects of soft drink consumption directly. There is therefore an important gap in the literature when it comes to explaining *why* there is so much soft drink consumption. This kind of evidence is important because it may provide evidence to enable alternative interventions to control soft drink consumption that go beyond interventions targeted at the individual. Therefore, this research aims to explore soft drink consumption as a social phenomenon in the context of everyday life.

1.10 Research gap

- Most studies investigating the factors associated with soft drink consumption are quantitative studies, with little qualitative research being done in this area.
- Most existing studies focus solely on adolescents and very few, if any, examine the experience of adults.
- The available quantitative and qualitative research highlights mostly individual factors associated with soft drink consumption and tends not to explore the role of context and situation on soft drink consumption.
- The individual meaning of soft drink consumption to consumers is missing from the literature.
- Qualitative research examining the factors associated with soft drink consumption are more often than not conducted using only data collection and analysis methods and are not guided by a methodology. This is a particular challenge since there are a whole range of theories that seek to explain the situated nature of human action.

1.11 Summary

This chapter presents a review of the literature around soft drink consumption. Five main themes in this area have been discussed: soft drink consumption among various age groups, the diseases associated with soft drink consumption, the factors that drive the consumption of soft drinks and the interventions that target soft drink consumption. This chapter shows that there is limited understanding of why soft drink consumption is high. This chapter also highlights that many studies on soft drink consumption focus on the individual. Later in this chapter, in section 1.7, I discuss the qualitative papers relevant to this topic. I constructively criticise these papers to find a new approach suitable for this study. Finally, this chapter ends with a summary of the literature review and the gap identified in the research. The next chapter concerns the theoretical framework that I adopt in this thesis. Briefly, it presents the two theories I use in this thesis, social practice theory and actor network theory.

Chapter 2: Theoretical background

2.1 Introduction

This chapter explains in detail the theoretical framework that I adopted in my thesis. In particular, it discusses the explanations and definitions of the social theories I used, a brief overview of the history and origins of these theories, how they can contribute to my research and justifications for why they are used. In this thesis, I use social practice theory as my main guiding theory, I also draw on actor network theory in a very limited way. Before I explain social practice theory, it is important to mention a few key points relevant to the literature review. In the literature review, the phenomenon of soft drink consumption is conceptualised in mainly one of two ways, either by focusing on the social structures that enable or disable individuals or on the individual themselves. I will explain these two approaches in greater detail by presenting two qualitative studies in the domain of soft drink consumption, namely, Hattersley et al. (2009) and Zoellner et al. (2012).

Hattersley et al. (2009) conducted a qualitative study to examine students' relationship with soft drinks by evaluating their attitude toward soft drinks, their soft drink consumption and their understanding of the health-related issues associated with soft drink consumption (section 1.7.1). In their results, they suggest that social cues play an important role in driving soft drink consumption. Moreover, they believe that there are social triggers that might enhance soft drink consumption among individuals. They provided several examples of these social drivers such as restaurants, bars and malls. This is an example of a study in the area of soft drink consumption that highlights the role of social structure which is here seen as a series of environmental 'drivers' towards consumption.

In contrast, Zoellner et al. (2012) produce a study focusing on the individual. Zoellner et al.'s (2012) study explores the consumption of sugar-sweetened beverages, water and artificially-sweetened beverages using the theory of planned behaviour as the research framework. The theory of planned behaviour is a psychological theory (Ajzen, 1991; Shove, 2010). Psychosocial theories state that if the level of one's knowledge increases, this leads to a better attitude and, as a consequence of this better attitude, good behaviour (Shove, 2010; Vihalemm et al., 2015). However, according to Bartiaux and Salmon (2012), attitudes develop as a result of and following our actions and behaviours, not before them. Full criticism of this debate will be provided in section 7.8.

Although the conceptualisations provided by the above mentioned studies undoubtedly have value, my thesis conceptualises soft drink consumption from a new perspective that departs from this literature. That is, my thesis does not focus on the individual nor the social structure but instead on the practice itself, in this case, the practice of soft drink consumption.

In the above and throughout this chapter, I discuss the theoretical justifications for choosing social practice theory and actor network theory as the framework for this thesis. However, it is important to mention that during my PhD, my main supervisor suggested I read several books about sociology. One was Shove et al.'s (2012) *The Dynamics of Social Practice: Everyday Life and How it Changes*. This book introduced me to social practice theory and inspired my interest in the subject. It also gave me a strong understanding of social practice theory and this enabled me to apply this theory in my study and to use social practice theory as the main framework for my research.

Another book that my supervisor suggested I read was *Conduct: Sociology and Social Worlds* by McFall et al. (2008). When reading this book, I came across the term “actor network theory” for the first time. After that, I decided to read *Actor-Network Theory: Trials, Trails and Translation* by Michael (2016) to help me understand actor network theory. This book has been very helpful to me during my PhD. It taught me about the concepts related to actor network theory so that I was later able to use actor network theory in my thesis. I then started to read more and more about these theories to allow me to use them in this study. Section 7.4 examines in detail how my readings in sociology and the use of social theories have influenced the data collection process and the interpretation of the data. The next section will discuss the origins and history of social practice theory, why it was developed and what it aims to achieve.

2.2 Origins and history of social practice theory

In sociology, historically there has often been a distinction between two main types of theory concerning human actions and how they can be best understood (Vihalemm et al., 2015). The first theory argues that people's actions are driven by individuals' rational choices, while the second theory argues that social structure tends to dominate or dictate human actions (Vihalemm et al., 2015). Different versions of these theories are common in the domain of public policy and some areas of the social sciences (Shove et al., 2012). Agency theory asserts that social arrangements come from and develop as the result of a large number of individual decisions and choices (Shove et al., 2012). This way of thinking aligns with the idea that our

beliefs dictate and produce our behaviours and actions and individual lifestyles come about mainly because of our choices (Shove et al., 2012). This kind of discourse has its roots in rational choice theory (Shove et al., 2012). As a counterpoint, theories of social structure focus on how society tends to dominate individuals through norms (Vihalemm et al., 2015). It argues that people's actions are directly shaped by social structure and that their actions change when the social structure changes (Vihalemm et al., 2015; Shove et al., 2012).

Many scholars have offered new approaches to try to overcome this debate by merging agency and social structure. (Vihalemm et al., 2015). The result is the emergence of theories of social practice (Hargreaves, 2011). The leading advocates of this approach are Anthony Giddens and Pierre Bourdieu (Vihalemm et al., 2015). However, recently, new social theorists have also supported the social practice theory approach, such as Reckwitz, Schatzki and Shove (Hargreaves, 2011). In his popular book *The Constitution of Society*, Giddens explains social practice theory in the following way:

“The basic domain of study of the social sciences, according to the theory of structuration, is neither the experience of the individual actor, nor the existence of any form of social totality, but social practices ordered across space and time.” (Giddens, 1984: 2)

Shove et al. (2012) suggest that Giddens offers an approach that goes beyond the problem of agency and structure theories without prioritising agency or structure but by adopting a middle ground. This is supported by Vihalemm et al. (2015) who argue that social practice theory as an approach does not prioritise the individual or social structure. Vihalemm et al. (2015) claim that social practice theory considers both social structure and the individual as it does not ignore the rational individual who makes decisions but also considers the role of the surrounding materials in which a practice or behaviour takes place.

2.3 Social practice theory definitions and approaches

It is widely accepted that there is no unified social practice ‘theory’ (Hargreaves, 2011; Nicolini, 2012; Vihalemm et al., 2015) rather, different approaches and definitions of social practice theory are provided in the literature. In what follows, I will highlight the range of social practice theory approaches and definitions, highlighting the similarities and differences between them.

Shove et al. (2012) explain their approach to social practice theory in their book *The Dynamics of Social Practice: Everyday Life and How it Changes*. They start their explanation of social

practice with two important concepts. First, any social practice is constituted of three main elements that come together and connect when the practice in question is performed. As such, social practices are brought into being, are sustained and collapse based on whether the elements come together or fall apart (Shove et al., 2012). Shove et al. (2012) claim that this approach focuses the analysis on the practice and its elements, keeping in mind that the practitioners become decentralised when performing the practice in question and, in this way, keep it alive and reproduce it. Shove et al. (2012) continue by identifying the three elements that constitute a social practice: materials, meanings and competence. Those elements are present in the social world and are waiting to be connected to form a social practice (Shove et al., 2012). The assumption that a social practice is brought into being because of the links made between elements can result in three practices (Shove et al., 2012). First are “proto practices”, which occur when the three elements, meanings, materials and competence, are available but are not yet linked (Shove et al., 2012, p.25). The second possibility is a “practice” where links have been made between the three elements (Shove et al., 2012, p.25). Finally, there is an “ex practice”, which occurs when the links between the elements have been broken (Shove et al., 2012, p.25).

Shove et al. (2012) continue to discuss how variant practices can connect to each other, so the outcome of this connection forms what is called “bundles” or “complexities”. Bundles are defined as different practices which are linked together in a certain location, however, and importantly, these practices do not rely on each other or influence one another, but are connected only as a result of sharing materials or location (Shove et al., 2012). For example, where there are many computers in a single area, people may undertake the practices of study or playing computer games. These two practices do not influence each other, they happen together only because both require a computer as the material which will bring them into being. On the other hand, complexities are defined as practices which not only happen together and share the same location, but are interconnected and depend on and affect each other (Shove et al., 2012). For example, in class, the practice of teaching is constituted by many different interdependent and interconnected practices. In relation to this point, Shove et al. (2012) mentioned how the elements of meanings or materials have the ability to connect between different practices. In terms of the meaning, they provide a really interesting example which is how the meaning of youth and modernity has played role in linking the practices of drinking, driving and wearing jeans in one bundle (Shove et al., 2012). While in terms of the role of the material in connecting between different practices they mention an example of how social

media connects between the practice of playing video games and the practice of socialising (Shove et al., 2012).

Vihalemm et al.'s (2015) understanding of social practices is very close to Shove et al.'s (2012). Vihalemm et al. (2015) similarly believe that a social practice is brought into being as a result of the interaction between the elements of materials, meanings and competence. However, Vihalemm et al. (2015) differ from Shove et al. (2012) in that they believe that the analysis of a social practice should also consider the element of social interaction. They explain the element of social interaction by providing an example of the practice of shopping with one's family (Vihalemm et al., 2015). In particular, they indicate that the interaction between the father and son about what they should pay is an example of a social interaction in the context of social practice theory.

Reckwitz's (2002) explanation of social practices is also close to those of both Shove et al. (2012) and Vihalemm et al. (2015). According to Blue (2016), Reckwitz (2002) believes that a social practice is constituted by several, interconnected elements. As Reckwitz (2002) explains:

“A ‘practice’ ... is a routinized type of behaviour which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge.” (Reckwitz, 2002: 249)

There are significant similarities between Shove et al.'s (2012) and Reckwitz's (2002) conceptualisations of social practices. In particular, the three elements, (materials, meanings and competence) identified by Shove et al. (2012) are also present in Reckwitz's (2002) definition. To illustrate this point, the concept of “know-how and bodily activity” as stated by Reckwitz (2002: 249), refers to the concept of competence as explained by Shove et al. (2012). Additionally, “things and their use” as identified by Reckwitz (2002: 249), reflects the idea of materials suggested by Shove et al. (2012). Finally, “motivational knowledge” (Reckwitz, 2002: 249) can indicate the meanings element discussed by Shove et al. (2012).

Nicolini's (2012) approach to social practice theory is somewhat different from the previous approaches discussed. Nicolini (2012) emphasises the idea that social practice theory is derived from multiple schools and diverse ways of thinking that share some commonalities but at the same time have their own ideas and terms. Therefore, in his book *Practice Theory, Work, and*

Organization: An Introduction, Nicolini (2012) does not offer one theory of social practice but introduces multiple ways of discussing the practice-based approach. He confirms that it is for this reason that he does not provide a single definition of the concept of a social practice. Thus, while authors such as Shove et al. (2012), Vihalemm et al. and (2015) Reckwitz (2002) try to provide a clear, simple and delineated explanation for social practices, for example, showing that social practices are based on three elements that can be linked and can break apart, Nicolini (2012), as mentioned above, emphasises the idea that there is no single social practice theory. Instead of a single theory, Nicolini (2012) provides a general explanation of what the social practice approach could mean. He presents his view in five points.

First, Nicolini (2012, p.3) argues that the practice-based approach tends to highlight and prioritise the concept of “activity and performance” when conceptualising the various aspects of social life. Additionally, the practice-based approach views social life as something continuous, routine and repeated. He provides an example of this by suggesting that institutions are brought into being and endure because of the routinization and repetition of certain activities. Second, Nicolini (2012) asserts that the practice-based approach tends to highlight the importance of the concept of both materials and body in any practice. As he explains, all social practices are composed of repeated “bodily activities” that are enabled by the surrounding materials (Nicolini, 2012, p.4). Nicolini (2012) provides a clear example to illustrate the role of materials in social practices by discussing the arrangements of seats and desks in classrooms. Specifically, the students’ seats all face the teacher and classrooms have a board and a clock (Nicolini, 2012). These materials help to make the practice of having a class possible. Also, they play a major role in the class. For example, the orientation of the teacher’s desk inherently captures the students’ attention so that teachers do not need to do much to focus students’ attention on them (Nicolini, 2012).

The third point Nicolini (2012) discusses are the limits on the agency of the individual. In other words, the practice-based approach believes that individuals are the carriers of social practices and the performers of these practices. However, and most importantly, Nicolini (2012) highlights that individuals do not perform a social practice completely deliberately or completely absent-mindedly but somewhere in between. Fourth, Nicolini (2012) proposes that the practice-based approach changes our understanding of knowledge. In short, the practice-based approach considers that a significant part of our knowledge involves how to act and how to perform social practices using our bodies and interacting with objects and materials (Nicolini, 2012).

To illustrate this point, Nicolini (2012) provides an example mentioned by Reckwitz (2002) of the practice of romantic love. The practice of romantic loves means using knowledge that is well-known culturally and socially (Reckwitz, 2002). For example, it is expected that the performer will buy “flowers” and say certain words commonly used by people who want to express romantic love (Reckwitz, 2002; Nicolini, 2012). Therefore, when individuals perform any social practice, they are expected to act in a way that reflects what is considered appropriate and what is not in relation to the practice concerned (Reckwitz, 2002; Nicolini, 2012). Finally, Nicolini (2012) suggests that social practice theory also considers the concept of power in the social practices that we engage in. In simple terms, social practices can provide individuals with the power to perform actions (Nicolini, 2012).

In conclusion, Nicolini’s (2012) approach to social theory is different from that of other authors because he believes that social theory is a very broad concept and is derived from multiple schools of thought. Thus, he offers a general discussion of social practice theory and summarises in five points what could fall under a practice-based approach (Nicolini, 2012). Additionally, Nicolini (2012) offers a methodology for social practice theory that will be discussed in detail in the methodology chapter (section 3.4).

In the context of social practices, Schatzki (2002) explains that the concepts of “practices as performances” and “practices as entities” are not the same. The differences between these two terms are explained by Shove et al. (2012) using the example of the practice of skateboarding. They claim that skateboarding is brought into being because of the links between different elements including the materials such as the street and the skateboard itself, for example (Shove et al., 2012). Also, there is the need for some competence, in this case, the skill that is needed and a bodily knowledge to perform the skateboarding and, finally, the meanings attached to this practice (Shove et al., 2012). A practice as a “performance” refers to the moment when the practice takes place while a practice as “entity” refers to whole things and knowledge around the practice that individuals can rely on if they want to perform the practice (Shove et al., 2012).

2.4 Application of social practice theory in this thesis

According to Shove et al. (2012), any social practice should consist of three elements that interact together at the moment of the practice, these are materials meanings and competence. For example, the social practice of studying needs materials which are, for example, notebooks, books and pens. In addition, studying needs some kind of competence such as reading and

writing. And finally studying needs meanings that are behind the studying, for example the need to be successful, or a famous author or to be proud of yourself and do great accomplishments. Another example, food consumption needs some materials such as food ingredients, a fork and spoons, it also needs some competence such as cooking skills and meanings such as eating to enjoy the time and have fun with other friends or family. For this research, I consider soft drink consumption as a social practice that has three elements: meanings, material, and competence. I draw on this approach to sensitise me to certain key aspects of how this social practice is arranged the way it is. To make this thesis easier to read, I will refer simply to “soft drink consumption” rather than “the social practice of soft drink consumption.” The framework and concepts I discuss concerning social practice theory will be evident across my research. The materials and methods chapter shows that most of my research steps are enlightened by this theory. For example, during the data collection process, I considered the concepts mentioned above, namely, materials, meanings, and competence. Also, a large part of my analysis is enlightened by this theory and a lot of my results use the language of this theory. In the discussion section, I discuss how this theory contributed to my research in detail (section 7.8). The next section will briefly discuss actor network theory as it is used for limited purposes in this thesis.

2.5 Actor network theory

Actor network theory has been applied in various domains including sociology, science and technology studies, geography and anthropology (Michael, 2016). It is also not one school of thought but several, and it is based on different social and philosophical assumptions (Michael, 2016). Actor network theory was introduced around the 1980s as an approach to examine scientific facts and information (Michael, 2016). Initially, actor network theory was concerned with understanding the life of laboratories and the materials involved in these laboratories and how these help in the “accreditation” of scientific facts (Michael, 2016, p. 11). In simple terms, laboratory life has been recognised as a field in which materials, written work and skills are brought together to produce texts that help to attract more actors (people and materials) (Michael, 2016, p. 11). These people and materials then help to enlarge the network related to laboratory life (Michael, 2016, p. 11). Michael (2016) states that an essential early text on actor network theory is the book written by Latour and Woolgar (1979) *Laboratory Life*, a book that contained what is referred to as traditional actor network theory.

2.6 Actor network theory as a promising approach

Actor network theory is considered a unique approach when it comes to understanding the “social” (Michael, 2016). First, actor network theory believes that the “social” is not only human but a combination of human and non-human actors (Michael, 2016). In simple terms, actor network theory pays as much attention to materials and technologies as it does to human actors (Michael, 2016). Second, actor network theory is unlike other theories in how it understands society (Michael, 2016). Other theories argue that, for example, the social can be conceptualised as consisting of layers, while actor network theory conceptualises society as flat and consisting of only one layer of associations between human and non-human actors (Michael, 2016). Third, actor network theory tends to largely avoid several terms and categories such as gender, social class and ethnicity, instead creating its own categories and terms including “human actors, non-human actors” and “mediators”. Fourth, actor network theory emphasises the importance of the connections between human and non-human actors, which form what are called hybrids (Michael, 2016). Therefore, giving the advantages of the social only is questionable for actor network theorists because what constitutes the social is both human and non-human actors (Michael, 2016).

2.7 Practical considerations for actor network theory

Empirically, actor network theory has been used to look at various things, for example, the function of technology in our everyday lives (Michael, 2016). Additionally, if the aim is to understand society, from the perspective of actor network theory, we need to look at the relations that are produced in society, knowing that these relations are made up of human and non-human actors (Michael, 2016). Therefore, the types of questions that can be asked in this context are what kinds of human and non-human actors are involved in these relations and what form do they generate (Michael, 2016)?

In what follows, I will show how some of the concepts related to actor work theory have been employed in the literature. For example, in their paper “Regions, networks and fluids: anaemia and social topology”, Mol and Law (1994) apply the concept that the meanings of a material or an object vary according to the networks and associations that embody this material or object. Anaemia as an object appears as pale “eyelids, gums and nailbeds” in patients across Africa (Mol and Law, 1994). Health professionals in Africa thus diagnose anaemia by looking for specific physical signs (Mol and Law, 1994). In contrast, in the Netherlands, anaemia presents

and is diagnosed in another way, through a form of “complaints” revealed by patients, such as “I feel tired” or “I feel dizzy”, so anaemia diagnosis in the Netherlands is achieved through listening (Mol and Law, 1994). Mol and Law (1994) and De Laet and Mol (2000) proposes the concept of material “fluidity” to highlight how material acts differently across different networks and associations. The term “fluidity” refers to the ability of a material to take multiple shapes depending on the context in which it is present (Mol and Law, 1994; De Laet and Mol, 2000). However, the fluidity here does not refer to the physical properties of a material but its multiple characteristics (De Laet and Mol, 2000).

The paragraph below presents another example to illustrate certain key concepts related to actor network theory. As we have seen in sociology, there has in the past been frequent debate on the concept of agency and structure (McFall et al., 2008). Agency is the capacity for persons to make choices (usually rational) freely and independently, therefore, they themselves take responsibility for their decisions (McFall et al., 2008). It has been argued that agency is a fundamental characteristic of human beings (McFall et al., 2008). McFall et al. (2008) indicate that several valuable points have been gained from theories of agency and structure, but this approach is not able to answer many of the questions in which agency seems not to be “contained” in humans, but rather distributed over their surroundings (McFall et al., 2008). Relevant to this discussion, Michael (2016) explains some of the concepts mentioned by Bruno Latour and John Law in terms of actor network theory, pointing out that our everyday lives are saturated with both the human and non-human. Non-human elements undoubtedly have a significant impact on all of society (Michael, 2016). When Michael (2016, p. 42) discusses the concept of “hybrids”, he provides an example highlighted by Law (1994) to illustrate this concept. Law (1994) argues that a manager would not be able to act properly as a manager without technology and other tools, for example, computers, phones, and desks.

Another idea related to actor network theory is explained by Mol and Law (1994) in their paper on anaemia. Mol and Law (1994) clarify that the notions of the network and fluid space are distinct. Mol and Law (1994) argue that when the term “network” is used, it indicates that the actors within a network rely on each other, so the absence of an actor within this network might significantly negatively affect the whole network (Mol and Law, 1994). Mol and Law (1994) explain that this is not the case in terms of fluid spaces, as in a fluid space, every component is dispensable. Mol and Law (1994) use these ideas to illustrate that, in terms of diagnosing anaemia in some places in Africa, doctors can treat and diagnose patients without the need for

a laboratory. So, the work of health professionals in these places does not break down when there is no laboratory and can continue (Mol and Law, 1994).

2.8 Application of actor network theory in this thesis.

In this thesis, I mainly use social practice theory as a guiding theory and framework for my research. However, to a limited extent and in some areas of this thesis, I apply concepts related to actor network theory. I employ this theory for two main reasons. In simple terms, in my thesis, I have employed some concepts and ideas that are common in the context of actor network theory. Using these concepts has helped me to enhance my results and discussion. Principally, I discuss how the meaning of soft drinks (as objects) vary according to the networks or the contexts that they are embedded within, as per actor network theory. Second, my understanding was advanced by another concept related to actor network theory that arises when I show in my project how the presence of soft drinks within meals is unnecessary and dispensable. The application of this theory is evident across the results sections, in particular sections 5.2 and 5.5. Finally, it is not possible to conclude from the data collected that soft drinks have agency. Rather, my findings show that meal deals and their arrangement influence soft drink consumption.

2.9 The link between social practice theory and actor network theory

In this section, I will highlight areas where social practice theory coincides with actor network theory. Shove et al. (2012), at the beginning of their book, state that they invoke ideas from the field of science and technology, a domain that has some similarities with social practice theory. Additionally, regarding agency, Shove et al. (2012) argue that agency is distributed over both humans and materials. The concept of distributed agency is one of the concepts related to actor network theory (Michael, 2016).

2.10 The “middle ground” between social practice theory and actor network theory

This section discusses where social practice theory and actor network theory converge and where they diverge. As such, this section clarifies the “middle ground” between the two theories. I then present a diagram showing the theoretical arrangement of this thesis. After that, I discuss what concepts have been adopted in this thesis from social practice theory and

actor network theory and what have not been included. In the following, I identify two areas where social practice theory and actor network theory meet.

The first area I would like to mention concerns the origins of these two theories. Nicolini (2012) states that social practice theory emerged from multiple ideas and schools. Similarly, Michael (2016) argues that actor network theory derived from several domains. The second area where social practice theory and actor network theory meet concerns how these theories perceive the concept of materials. To illustrate, Shove et al. (2012) highlight the role of materials when they discuss what constitutes a social practice. Nicolini (2012) also considers materials to be an important aspect of social practice theory. Finally, in his explanations of actor network theory, Michael (2016) points out that non-human actors (materials) are as important as human actors.

Hui et al. (2016, p. 3) argue that some forms of actor network theory focus on the concept of social “practices” in their approach and, as such, can be seen as a form of social practice theory. The previous paragraph illustrates how network theory can resemble social practice theory in terms of the origins of these theories and how they view the concept of materials. Also relevant to the discussion of the similarities between social practice theory and actor network theory is what Nicolini (2012) says about applying them together. Specifically, Nicolini (2012) states that actor network theory can be used jointly with social practice theory to study social practices. The details of Nicolini’s (2012) thoughts on social practice theory and actor network theory are discussed below. In the following, I present some of the points where social practice theory and actor network theory differ.

Actor network theory uses unique vocabulary and terms such as “human actors” and “non-human actors” (Michael, 2016). This terminology is distinct from the vocabulary used in social practice theory. In other words, the two theories use different language to refer to the same concepts. For example, regarding the concept of materials, as social practice theorists, Shove et al. (2012) and Nicolini (2012) both use the term “materials” while, as Michael (2016) explains, actor network theory uses the term “non-human actors”. Regarding the concept of individuals, actor network theory uses the term “human actors” (Michael, 2016) while social practice theory uses the terms “carriers” or “practitioners” (Shove et al., 2012). Social practice theory also diverges from actor network theory when it comes to the understanding of the concept of individuals. Shove et al. (2012) tend to “decentre” the individuals who perform a social practice. In contrast, Michael (2016) explains that actor network theory is based entirely on two key concepts: human and non-human actors.

Therefore, the concept of the individual in actor network theory is the focus of much attention. It is also worth noting here that, according to Nicolini (2012), social practice theory treats individuals as not completely rational or irrational but something in between.

In this context, it is worth mentioning Nicolini's (2012) thoughts on social practice theory and actor network theory. However, before discussing what Nicolini (2012) said on the link between social practice theory and actor network theory, I will first mention other valuable points made by Nicolini (2012). Nicolini (2012) points out that social practice theory is not a single theory but several theories that come from various academic beliefs. Section 2.3 reflects the idea that there are many approaches to and versions of social practice theory.

Nicolini (2012) discusses the history and origins of social practice theory and the scholars who have contributed to its development and the concept of "practice". Some of the details of the history of social practice theory are presented in section 2.2. Additionally, Chapter 4, which describes the study's research materials and methods, shows how my data collection strategy aligns with Nicolini's (2012) ideas. Nicolini (2012) references many scholars who have made contributions to social practice theory, including Anthony Giddens, Pierre Bourdieu, Marx and Wittgenstein. After his discussion about what social practice theory is, Nicolini (2012) explains that he has assembled the various practice theories to generate a methodology for investigating social practices. This is explained in section 3.4.

In his discussions about both social practice theory and actor network theory, Nicolini (2012) analyses Schatzki's work on social practice theory and Latour's work on actor network theory. Nicolini (2012) states that there is a problem with the way Schatzki conceptualises how practices are associated with each other. According to Nicolini (2012), Schatzki is intensively focused on the theoretical aspect. This is reflected, for instance, in Schatzki's argument that all practices are associated with each other across four fundamental processes (Nicolini, 2012). Nicolini (2012) argues that this approach is questionable because the proper way to understand how practices are associated with each other is through empirical research, not theory. Moreover, Nicolini (2012) points out that Schatzki does not explain how remote practices are linked. Additionally, in terms of observation strategy, Nicolini (2012) argues that it lacks clarity and does not provide sufficient guidance about what should be sought and investigated.

In contrast, Nicolini (2012, p. 179) states that the concept of "sociology of translation" proposed by Latour takes into consideration how remote practices can be associated with each other. Nicolini (2012, p. 179) also describes actor network theory as being more "pragmatic".

Nicolini argues (2012, p. 180) that actor network theory, as proposed by Latour, and its notions such as “stabilisation” and “translation” enabled Latour to approach and understand the “social”. In terms of methodology, Latour’s suggestion to “follow the actor” helps to address a point that is not covered by Schatzki’s work (Nicolini, 2012, p. 180). For this reason, Nicolini (2012) proposes that Schatzki’s and Latour’s work can be connected and used jointly. In the following, I will explain Nicolini’s (2012) ideas about how actor network theory and social practice theory can be connected. Nicolini (2012) explains that studying social practices can be achieved using two main approaches: “zooming in” and “zooming out”. Section 3.4 explains these concepts in detail. Importantly, it is during Nicolini’s (2012, p. 230) explanation of how “zooming out” can be conducted that he suggests the use of “the sociology of translation” and “actor network theory” proposed by Latour (2005), Czarniawska (2007) and Law (2009). Additionally, Nicolini (2012) explains that “zooming out” can be conducted in two steps. The first step of “zooming out” is identifying the practices that are associated with the practice being studied (Nicolini, 2012). According to Nicolini (2012), this can be done by tracing these practices and their associations empirically. To do this, Nicolini (2012, p. 231) recommends using several methodologies that were designed to trace “human and nonhuman actors” but which he employs to trace social practices. The second step of “zooming out” is to examine how all the practices identified and their associations are maintained jointly (Nicolini, 2012). At this second step, Nicolini (2012) discusses and suggests the use of the sociology of translation. According to Nicolini (2012), the concept of the sociology of translation takes into consideration the necessity of maintaining the links between social practices, which is achieved using people and materials. Thus, Nicolini’s (2012) methodology for studying social practices utilises some aspects of actor network theory.

To further illustrate the above, I will provide some details and examples. First, I mention above that Schatzki (2002) argues that across four fundamental processes, all social practices are associated with each other. These four fundamental processes are found in Schatzki’s (2002, p. 87) definition of a practice as “a temporally evolving, open-ended set of doings and sayings linked by practical understandings, rules, teleo-affective structure and general understandings” (Schatzki, 2002, p. 87). Second, earlier, I presented Nicolini’s (2012) discussion on Latour’s suggestion to “follow the actor”. According to Michael (2016), the idea to “follow the actor” is referred to by Latour (1987) and Callon (1986). Third, above, I state that Nicolini (2012, p. 231) suggests several methodologies for the first step of “zooming out”. The methodologies that Nicolini (2012, p. 231) recommends for this step are

either “multi-site and focused ethnography”, as put forward by Marcus (1995), Hannerz (2003) and Knoblauch (2005), or what Nicolini (2012, p. 231) describes as “shadowing, log studies, and diaries”, as proposed by Czarniawska (2007).

Fourth, to illustrate the concepts discussed by Nicolini (2012) related to remote practices and the link between these practices, section 3.6 presents a clear example offered by Nicolini (2012) about the practice of telemedicine that can clarify this point. Additionally, I provide a further example of remote practices and how they are linked in relation to soft drink consumption. In my example, I attempt to follow the structure of Nicolini’s (2012) telemedicine example and apply the concepts of “zooming in” and “zooming out” proposed by Nicolini (2012). My example is as follows: if we want to study soft drink consumption among population A at organisation A, it is not enough to just examine those in population A who consume soft drinks inside organisation A. Rather, we need to see how other remote practices influence this soft drink consumption. For example, we need to examine the practices of the shops that sell soft drinks and that might drive people to consume soft drinks. Additionally, we could study the practices of the soft drinks factories that produce soft drinks and supply them to shops. Moreover, we can examine the association between the practices of the shops and the practices of the soft drinks factories and see how they both contribute to the consumption of soft drinks among population A. Examining all of these remote practices (shop and soft drinks factories’ practices related to soft drink consumption among population A) and their associations will help us to understand soft drink consumption among population A.

Finally, to illustrate the idea of when and how Nicolini (2012) uses the concept of the sociology of translation to understand social practices, I will use the same example described above. In this example, I apply the concepts of “zooming in” and “zooming out” proposed by Nicolini (2012). Additionally, in this example, I rely on Michael’s (2016) explanations of the concept of translation put forward by Callon (1986), Callon (1986a) and Latour (1983).

In the example above, it is concluded that to properly understand soft drink consumption among population A, we should study shops’ practices, soft drinks factories’ practices and their associations to see how all of these factors influence the consumption of soft drink among population A. After identifying the other practices that influence soft drink consumption, and following Nicolini’s (2012) methodology, it is now time to apply the concept of translation. This involves looking at the materials and people that help to maintain the social practices

identified. For example, we could investigate if the shops make offers that encourage population A to keep returning. Also, we could explore whether there are attractive, inexpensive meal deals on offer that include good-tasting soft drinks. Additionally, we could consider whether soft drinks factories offer good supply services to shops that encourage shops to keep taking stocks of soft drinks from these factories. These actors (meal deals, good-tasting soft drinks, effective services, managers who set offers etc.) are essential to maintaining the link between population A, shops and soft drinks factories and thus to maintaining soft drink consumption among population A. The following diagram illustrates the theoretical arrangement of this thesis.

The theoretical arrangement diagram

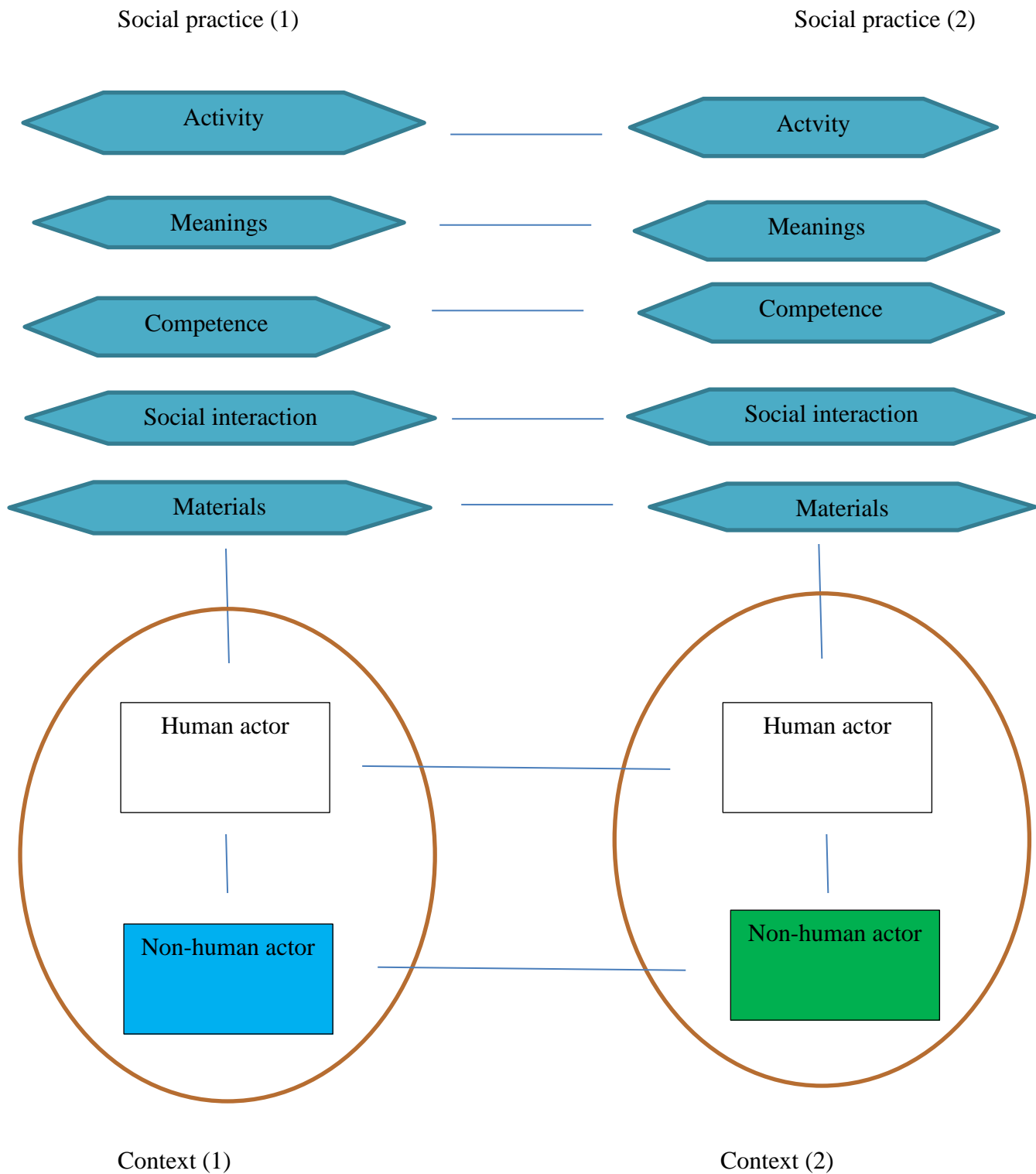


Figure 1. The theoretical arrangement of this thesis, which stemmed from multiple authors' work on social practice theory and actor network theory. For social practice theory, the authors referenced are Shove et al. (2012), Nicolini (2012) and Vihalemm et al. (2015). For actor network theory, the authors referenced are Michael (2016) and Mol and Law (1994).

The following explains where the components and concepts in the diagram stemmed from and describes the diagram. The components are activity, meanings, materials, competence and social interactions. These elements are identified by different authors as the components of social practice theory. The details of these components are discussed in section 2.3. However, briefly, Shove et al. (2012) state that any social practice consists of materials, meanings and competence. Vihalemm et al. (2015) agree with Shove et al. (2012) but add another element: social interaction. Nicolini (2012) also explores several concepts that are important in social practice theory, including materials and activity. All of these concepts are in the diagram and have been incorporated into my study. For example, as per social practice theory, when analysing soft drink consumption and meal deals, we focus on the materials and meanings. Another important concept mentioned by Shove et al. (2012) and presented in this diagram is that some social practices are interlinked. This is illustrated in the top part of the diagram where I present two social practices beside each other.

In terms of actor network theory, two important concepts are presented in the diagram. First, the concept that human and non-human actors are linked as proposed by Michael (2016). Second, the concept discussed by Mol and Law (1994), that materials vary from context to context. These two concepts are explained in section 2.7.

In the diagram, I use four similar-sized rectangles to illustrate the first concept. Two of the rectangles represent human actors and the other two represent non-human actors. I connect them with lines to highlight the importance of the link between human and non-human actors as discussed by Michael (2016). A quick example of the first concept could be the actors related to meal deal consumption. In this example, the human actors possibly include the people who consume the meal deals, while the non-human actors could be the soft drinks, sandwiches and snacks in the meal deals.

In the diagram, to show the second concept, which is discussed by Mol and Law (1994), I put the term “context (1)” on the lower left side of the diagram and “context (2)” on the lower right side of the diagram. Above the term “context (1)”, the non-human actor (material) is represented by a blue rectangle, indicating that this material appears in blue in context (1).

If we imagine that the same non-human actor (the blue rectangle) moves to context (2), then it will change when in that context. That is why above the term “context (2)” I represent the non-human actor by a green rectangle. This is to show that materials vary from context to context, as described by Mol and Law (1994).

A quick example of materials varying from one context to another can be seen in the findings of this study (section 5.2) when I show that soft drinks (non-human actors) are consumed before the gym to give consumers energy while they are consumed in hot weather to help consumers to cool down.

As I show in this chapter, this research uses social practice theory and actor network theory as its frameworks. Moreover, I state that social practice theory has been adopted as the main theoretical framework for this study while actor network theory has been applied in a very limited way. In the following, I explain the aspects of social practice theory and actor network theory that have been adopted in this study and those that have been put aside.

In terms of social practice theory, many of this theory's concepts have been adopted. This is because it is the main theoretical framework for this research. Sections 4.2.6, 4.3.5 and 4.4.4 present the concepts that I have adopted and that have influenced my results and analyses. Additionally, section 2.3 explains certain social practice theory concepts, including the concepts that I have adopted in my study. Importantly, section 2.3 indicates that there are many definitions of and approaches to social practice theory proposed by several different authors. Therefore, to clarify what aspects of social practice theory have been adopted in this study, it is important to note that it has primarily been influenced by the approach to social practice theory put forward by Shove et al. (2012). This is most evident in sections 4.2.6, 4.3.5 and 4.4.4 where I discuss the concepts proposed by Shove et al. (2012) that I have adopted and have influenced my analyses. Additionally, the data collection strategy of this study aligns to a certain degree with Nicolini's (2012) methodology for social practice theory, as explained in sections 4.2.1, 4.3.1, 4.4.1 and 7.4. Furthermore, section 7.4 discusses how using social practice theory impacted the data collection process and interpretation of the data.

Nonetheless, there may still be some concepts related to social practice theory that have not been included in this study. However, clearly defining what has been put aside is impractical. This is because, as I explain in section 2.3, there are many versions of social practice theory proposed by various authors. Therefore, the focus of the above paragraphs is on what has been applied from social practice theory in this study, which helps to reflect what concepts have not been adopted.

In contrast to social practice theory, actor network theory has been applied in a very limited way in this study. Therefore, only a few concepts have been included from this theory. Section 4.2.6. present the concepts that I have adopted and that have influenced my results and analyses

and the following section, section 2.7, explains these concepts. Additionally, section 7.4 discusses how using actor network theory has influenced the data collection process and interpretation of the data. No actor network theory concepts other than those mentioned have been adopted in this study.

2.11 Summary

This chapter presents the theoretical framework that I adopt in this thesis, which is primarily based on social practice theory and secondarily on actor network theory. At the beginning of the chapter, I justify why I have selected social practice theory, emphasising that this theory can help this study to overcome the limitations of the approaches that have been employed in previous literature, such as agency theory and structure theory.

Then, this chapter presents a brief history of social practice theory and goes on to discuss some of the approaches of social practice theory. Next, this chapter presents some background on actor network theory. After that, this chapter goes on to discuss the middle ground between social practice theory and actor network theory. Following that, this chapter presents a diagram illustrating the theoretical arrangement of the thesis.

The next chapter discusses the research methodology applied in this thesis. In particular, it describes Nicolini's (2012) suggestions in terms of the methodological approach for the study of social practices. The following sections in this chapter present the rationale, aim and objectives of this study.

2.12 Rationale of the study

In chapter one, the literature review, I conclude that we have an insufficient understanding of why people excessively consume soft drinks. Additionally, I state that most of the studies conducted on the topic of soft drinks are quantitative and highlight the need for further qualitative research, particularly based on observation, to properly understand high soft drink consumption. Moreover, I mention that there is almost no discussion on the meanings of soft drink consumption in the literature. More details about the rationale of the study are found in sections 1.9 and 1.10. Section 1.9 presents a summary of the literature and section 1.10 discusses the research gap. The aim and objectives of this research are based on the conclusions of the literature review and are presented in the following two sections.

2.13 Aim

To explore soft drink consumption as a social phenomenon in the context of everyday life.

2.14 Objectives

- To conduct an observational study among adults, in which participants (consumers of soft drink) are observed and both formally and informally interviewed.
- To explore participants' reflections on the meaning of soft drink consumption.
- To observe the phenomena of soft drink consumption in natural settings drawing on the theory of social practices.

Chapter 3: Methodology

3.1 Introduction

This chapter will describe the methodology used in this research, which focuses on social practices in the domain of soft drink consumption. The methodology I propose differs from the methodologies employed in the literature to investigate soft drink consumption. However, before discussing my approach, it is important to briefly highlight the weaknesses of the methodologies used in the existing studies on soft drink consumption. There are two key weaknesses of the research methodologies used in the study of soft drink consumption. First, qualitative studies in this field are based on interviews and/or focus groups only (Hattersley et al., 2009; Block et al., 2011; Krukowski, 2015; Zoellner et al. 2012, Roth-Yousey et al. 2012). None of the extant studies use observation as part of their data collection methodologies. While it is important to note that these studies' findings are valuable and interviews and focus groups will reveal important insights, but nonetheless observation can add a lot in this area as it can capture the underlying phenomena being studied in its 'natural' setting. In this case, observation allows researchers to collect data on how soft drink consumption is practiced in everyday life and to clearly identify the materials and competence that are needed to make this practice happen.

The second weakness of the methodologies used in the literature is their focus on the theory of planned behaviour as a research framework (Krukowski, 2015; Zoellner et al. 2012), which, although useful, is not the most thorough methodology to apply. The criticism of this theory will be discussed in detail in section 7.8. In summary, this research adopts an observational approach with social practice theory used as the project's research framework.

3.2 Choosing observational study to address the aim of this study

This chapter starts by considering observation as a methodology for this research, an approach that has been inspired by ethnography. The next section introduces and discuss ethnography before I go on to discuss how this approach has been used to study soft drink consumption as a social practice.

3.3 Introducing ethnography

Ethnography, in general, involves the exploration of the culture and lifestyles of a particular people (Atkinson & Pugsley, 2005). It is derived from community studies, urban sociology, and anthropology (Atkinson & Pugsley, 2005). These three branches have some differences,

however, they all involve the investigation of social interactions, culture, and behaviour within a particular group (Atkinson & Pugsley, 2005). The investigation is conducted over a considerable period of time when researchers living in the community, they can provide understanding of the views of that community (Atkinson & Pugsley, 2005). Researchers often spend several months to years living in the community collecting a great amount of data that can be used to build a picture of the community, including individuals' behaviours (Reeves et al., 2008). Ethnography developed from anthropology, which involves an exploration of foreign culture and lifestyles outside the researcher's country (Eriksson & Kovalainen, 2015). Following this, many researchers have started to examine some areas inside their culture (Eriksson & Kovalainen, 2015). For example, a group of Chicago sociologists began to examine the lives of some groups within their society (Hammersley & Atkinson, 1983).

Before describing the ways in which ethnographic research can be conducted, some of the philosophies that underpin ethnographic research should be mentioned. The following background is mainly derived from Hammersley and Atkinson's work, *Ethnography Principles in Practice* (1983). Positivism underpins quantitative research as this approach believes that knowledge and truth can be achieved from measuring variables because variables can be objectively tested through surveys and the experimental method (Hammersley & Atkinson, 1983). Therefore, within this approach it is felt that one can examine associations between variables (Hammersley & Atkinson, 1983). It is also possible to transfer social behaviour data to variables that can subsequently be objectively measured (Hammersley & Atkinson, 1983). If such measurements have not been taken, the results would be subjective and, therefore, unreliable (Hammersley & Atkinson, 1983). In contrast the philosophical movement of naturalism supports the ethnographic method (Hammersley & Atkinson, 1983). This approach believes that social behaviour and interaction can be better viewed in its natural environment (Hammersley & Atkinson, 1983). Some scholars have argued that to examine social behaviours through questionnaires or interviews means that taking them out of context, which will produce unreliable results (Hammersley & Atkinson, 1983). Additionally, transforming social behaviours into variables means dealing with them as if they were machines (Hammersley & Atkinson, 1983). In contrast ethnographic researchers such as Hammersley and Atkinson (1983) argue that social behaviours must be analysed through their meanings, which are best studied in their natural environment (Hammersley & Atkinson, 1983).

The naturalist approach has been criticized on the basis that it is not possible to objectively observe human behaviour and social interactions in the natural setting, and so the accuracy of

any results obtained would be questionable (Hammersley & Atkinson, 1983). Critics point out that the nature of ethnographic analysis lacks objectivity, as the assumptions and backgrounds of researchers will influence the findings of their research and undermine their objectivity (Hammersley & Atkinson, 1983). Hammersley and Atkinson (1983) concluded that both positivism and naturalism have the aim to produce objective results. However, both acknowledge "reflexivity", meaning that the researcher can influence the research process. They argue that, in all social research, reflexivity must be considered, however, although it conflicts with "naive realism", it should not restrict researchers to conduct their studies (Hammersley & Atkinson, 1983).

An important step in any ethnographic study is to choose the site on which the data will be collected. This site must be appropriate to address the research question (Eriksson & Kovalainen, 2015). Before data collection, a temporary research question may be established (Eriksson & Kovalainen, 2015). However, as the data collection process progresses, the question may be modified or completely replaced by a new question (Hammersley & Atkinson, 1983). There are many reasons for this including the fact that researchers may find they are wrong in their assumptions when formulating the question or that it is not possible to make observations to address the research question (Hammersley & Atkinson, 1983). Ethnographic data collection can be collected in several different ways (Hammersley & Atkinson, 1983). By joining the target culture for extended period of time, researchers can collect data through observation, formal and informal interviews, and documents (Hammersley & Atkinson, 1983). This data can be recorded by notetaking, sound recording, and photography (Hammersley & Atkinson, 1983). The time period of data collection, the participants, and the context are all aspects that need to be considered when collecting ethnographic data (Hammersley & Atkinson, 1983). Once the data has been collected, it will be analysed in-depth so that the researchers can look for categories, patterns and significant points before transferring these to different themes that describe social phenomenon (Eriksson & Kovalainen, 2015).

There are challenges however that have to be confronted with ethnography. Some scholars have argued that ethnography is entirely subjective (Atkinson & Pugsley, 2005). To address this criticism, in this study I sought to follow the guidance provided by Atkinson and Pugsley (2005) who state that researchers should observe in the field for extended period of time to reduce the potential for subjectivity. Moreover, it is recommended that a sufficient amount of data is collected, and that the analysis is based only on what has been collected to improve the trustworthiness of the findings (Atkinson & Pugsley, 2005). In addition, the researcher should

acknowledge how s/he might influence the research process as reflexivity is important in this research (Hammersley & Atkinson, 1983). Another criticism of ethnography is that many participants will change their behaviours and social interactions when they are aware they are being observed, so the data collected will not be reliable (Atkinson & Pugsley, 2005). Atkinson and Pugsley (2005) suggest this assumption is incorrect as the researcher observes for an extended period of time, which enables them to capture the reality of daily activities rather than non-usual daily routines.

An observational study that is inspired by ethnography was deemed suitable for this study because it would enable the 'naturalistic' observation of soft drink consumption within a particular setting. This is in keeping with a number of social practice theorists' views on how to study social practices. The next section introduces the work of Nicolini (2012) which proved particularly useful in this study.

3.4 Methodological approaches for the study of social practices.

Nicolini (2012) describes his approach as a "toolkit" (p. 215) for the study of social practices. After lengthy discussions and explanations of social practice theories and his clarifications that there are differences in the way that we can approach social practices, Nicolini (2012, p. 213) goes on to suggest that he intends to group all these theories together and come up with a practical way "to study" social practices "empirically". Nicolini (2012) argues that producing theories about social practices is not enough, there is a need for a methodology as well. This practical way of studying social practices is driven by and stems from the multiple social practice theories put forward by various authors (Nicolini, 2012).

A practical way to study social practice identifies the steps for conducting this type of research including how to collect data by, for example, listening, watching and even smelling (Nicolini, 2012). Nicolini (2012) asserts that his approach to studying social practices empirically is based on observation as one cannot get a full understanding of social practices through surveys and interviews alone. There is a need for observation to watch and examine social practices carefully (Nicolini, 2012). He called this the "theory-method package" and explains that it includes two main steps, first "zooming in" on the practices as they are performed, and second, "zooming out" to see how they are situated in "space and time" (Nicolini, 2012, p. 213).

3.5 “Zooming in” by looking at details of the practice at consideration

In terms of “zooming in”, Nicolini (2012, p.220) outlines a series of approaches to observation that may help guide how best to observe the social practice of soft drink consumption. Relevant themes presented by Nicolini (2012, p. 220) include:

“Sayings and doings”

Observation-based research done in this area should start aim to look at, for instance, what individuals do and say in relation to the social practice in question (Nicolini, 2012). This type of research could also look at the techniques used by performers that enable them to perform a social practice (Nicolini, 2012). Such studies should also consider the time flow factor when examining what is said and done (Nicolini, 2012). Concerning my topic, soft drink consumption, this would mean finding a way to look at how individuals consume soft drinks in “time and space”. Establishing how this is achieved across sites where relevant. It means examining the techniques used by performers, which in turn could mean looking at the processes that consumers go through to consume soft drinks, for example, when they eat a meal, do they end up having a soft drink? If so, where, when and why?

“Bodily choreography”

Under this theme, observational studies could explore the relationship between the social practice and the body (Nicolini, 2012). For example, they could explore how the body can perform the practice in question or how bodies are constructed by the practice (Nicolini, 2012). In my study, this could be applied by observing individuals’ bodies when they consume soft drinks and whether consumption occurs when they are sitting or on the go.

“Tools, artefacts and mediation work”

When considering tools and artefacts, a wide range of research questions could be applied (Nicolini, 2012). One question concerns examining the materials that are used in the social practice in question to see how these materials relate to other practices (Nicolini, 2012). In my study, this examination involves conducting observations to identify the materials needed for soft drink consumption, such as the soft drink cans or bottles and how these materials are connected to other practices. For example, soft drink cans might be connected to the practices of studying and socialising.

“Timing and tempo”

Regarding timing and tempo, research examples in this area can explore the temporal arrangements of what is being said and done relevant to the practice under investigation, or explore what has been said and done considering the time flow factor (Nicolini, 2012). In the context of my study, this means conducting observations concerning on the phenomenon of soft drink consumption considering the actions that people perform when they consume soft drinks and the time factor.

“Practical concerns”

Research investigating this element may look at the practical concerns that dictate the actions of the performers of a social practice (Nicolini, 2012). In my research, this means that I could look at the practical factors that affect the consumer and influence soft drink consumption, for example, the availability of soft drinks, their price, and their accessibility.

“Tension between creativity and normativity”

According to Nicolini (2012), research questions in this area might look at what the performers of the practice concerned do and how they talk about the social practice in question. Regarding my research focus of soft drink consumption as a social practice, I could look at soft drink consumers and observe the different elements they need to consume soft drinks, such as the materials and competence involved. Also, I could talk with soft drink consumers to examine what they have to say about soft drinks.

“Process of legitimisation and stabilisation”

One of the research questions that could be asked under the theme of the “process of legitimisation and stabilisation” is whether the performers of social practices think that by performing a certain practice, they belong to a certain community (Nicolini, 2012). In the context of my study, this means looking at soft drink consumers to investigate whether they feel that by consuming soft drinks they belong to a certain group or category.

3.6 “Zooming out” by looking at social practices and the connections between them

Nicolini (2012) suggests that it is not enough to study and examine social practices at the local level by “zooming in”. To understand the full picture of a social practice, a further step, what Nicolini (2012) calls “zooming out”, is needed. The reason for this is that no social practice occurs in isolation, they are always connected to and exist in a web of other social practices in “space and time” (Nicolini, 2012, p. 229). Nicolini (2012) goes on to provide an example of the practice of telemedicine to illustrate this point. According to Nicolini (2012), telemedicine cannot be properly understood by looking only locally at the connection between patients and health professionals. To fully understand telemedicine, there is a need to go further and study the whole phenomenon including the individuals who work at laboratories and the computers and electronics that are used by health professionals (Nicolini, 2012). According to Nicolini (2012), the example of “telemedicine” is used in his book to clarify the concepts discussed. However, Nicolini (2012) explains that this example is derived from his earlier research (Nicolini, 2006; 2007; 2009; 2011).

Nicolini (2012) explains that studying the connections between social practices is achieved through what he terms “zooming out”. The goal of “zooming out” is to look at different things, first, to see the connection between the practice being studied and other practices, second, to see how other social practices affect, enable or restrain the practice under consideration, third, to see how the practice concerned contributes to other practices and what would occur without it, fourth, to examine how the practice in question operates in at different areas and contexts (Nicolini, 2012). The practical way to zoom out is by tracing the connections between practices empirically and to identify the materials that connect these practices (Nicolini, 2012). It is for this reason that the study of social practices requires observation at multiple sites, for example, to follow materials from one site to another (Nicolini, 2012).

3.7 “Zooming out” in relation to soft drink consumption

In section 3.5, I show what the concept of “zooming in” means in relation to my study on soft drink consumption as a social practice. Here, I will discuss the application of Nicolini’s (2012, p.228) “zooming out” concept in this research.

In the study of soft drink consumption, “zooming out” means that it is not enough to only examine what people do and say concerning soft drinks, there is also a need to see what other

practices influence soft drink consumption and how they enable or restrain the consumption of soft drinks. Also, Nicolini (2012) recommends that, if you are interested in the materials involved in a social practice, you should follow them to other contexts. So, in terms of soft drinks, we can follow soft drinks as a material and see how it works in other areas and contexts.

3.8 summary

As explained in chapter 2 and section 7.8, social practice theory is promising. Therefore, applying it to the study of soft drink consumption will provide new and valuable insights in this area and will produce potentially important findings for interventions concerning this practice. The next chapter concerns the materials and methods used in this study. It presents in detail the steps followed in this qualitative observational study.

Chapter 4: Materials and methods

4.1 Introduction

O'Brien et al. (2014) discuss the ideal way of writing and reporting qualitative research from the title to the conclusion. Regarding the materials and methods section, they outline the headings that this section should contain. For example, the researcher should discuss the context and site of the study, the sampling strategy and data collection methods used, reflexivity, participant characteristics and so on. In this chapter, I will follow the guidelines provided by O'Brien et al. (2014). Therefore, the headings and subheadings in this section will largely align with those mentioned in the O'Brien et al. (2014) paper. To begin, it is extremely important to note that this project was conducted over three stages of data collection and analysis. Each stage will be reported with its own section of results, analyses and discussion. For each stage, I will report on the key points mentioned by O'Brien et al. (2014) as a way to ensure the quality of my reporting in this thesis. The methods of this study were developed over several stages, as described in Figure 2.

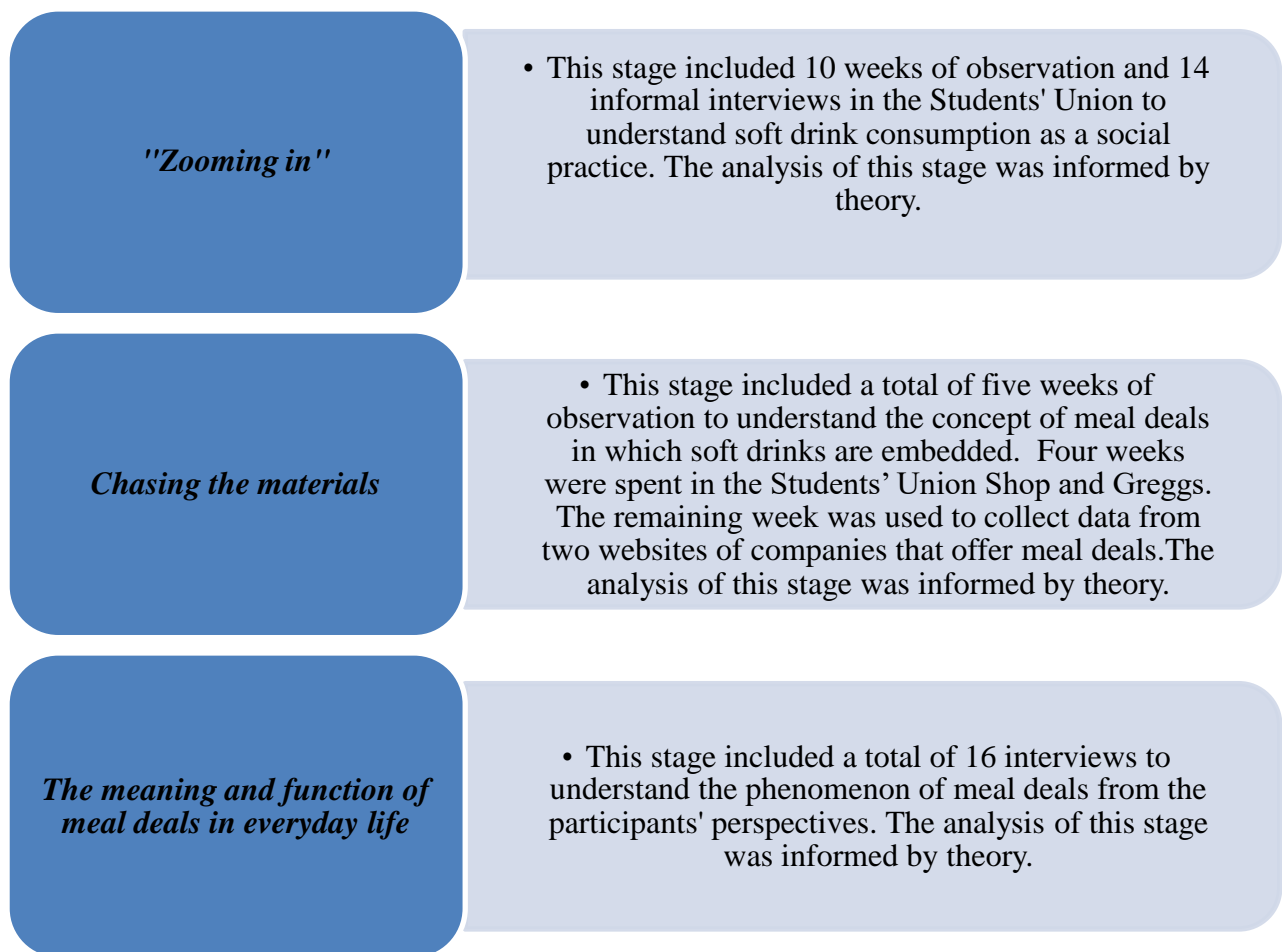


Figure 2. The three stages of data collection and analysis in this observational study

4.2 Stage one: “Zooming in”

Stage one of this project started after I completed writing the literature review and after I set the aim of this research to explore the soft drink consumption as a social phenomenon in the context of everyday life. At that time, I was aware that high levels of soft drink consumption had been identified as the main reason for the high levels of sugar consumption in the UK (Public Health England, 2015) and these high levels of sugar consumption are having a range of dental and general health consequences (Popkin, 2012). In particular, high sugar consumption is implicated in dental caries, dental erosion, obesity and type 2 diabetes (Schulze et al., 2004; Hua and Malik, 2010; May and Waterhouse, 2003; Tahmassebi et al., 2006). Additionally, after reading the literature, I identified that the existing research emphasises the significance of individuals’ behaviours and that the factors contributing to the consumption of soft drinks among “adults” are under-researched.

Following this, I chose social practice theory as the guiding theory for my research as it offers a new perspective for understanding soft drink consumption. As mentioned in the theoretical framework chapter, this theory, according to Vihalemm et al. (2015), does not prioritise the individual or social structure but focuses on the practice itself and considers both the structural and individual perspectives. It is therefore suited to examining the downstream and upstream determinants of soft drink consumption. Given this, I decided to explore soft drink consumption as a social phenomenon in the context of everyday life by first of all “zooming in” on the practices as they happened (Nicolini, 2012).

4.2.1 Context and time

I chose the Students’ Union building at the University of Sheffield to begin to conduct data collection for several reasons. First there is a shop and many cafes and restaurants in the building in which I can observe the phenomenon of soft drink consumption. Here, I can observe the consumers of soft drinks and the presentation of soft drinks, that is, where they are sold and positioned in this building. In brief, in this building I could collect a lot of rich data about the phenomenon of soft drink consumption as a social practice. Another important reason for choosing the Students’ Union for data collection is that we can find adult participants here, and as we have seen this group is under-researched in the literature.

The decision to collect data from the Students' Union to explore soft drink consumption aligns with the advice given by several authors who discuss social practice theory. First, my approach reflects how Nicolini (2012) applies social practice theory. Nicolini (2012) suggests observing what is done and said in terms of the social practice in question and in this thesis, I aimed to explore and observe what people say and do in terms of soft drink consumption. In addition, I observed what practices are associated with soft drink consumption. This idea agrees with Shove et al. (2012), who suggest that social practices are interconnected.

The Students' Union is a university building in which various social activities are practiced. At this place, many services are offered to students. For example, there is an advice department to provide students with guidance regarding personal and academic issues. Furthermore, this building contains several restaurants, cafes and shops. Students can thus go and buy their meals from the Students' Union. There is a shop (hereafter Students' Union Shop), in this Shop, I began collecting data for 'stage two' of the research. The Students' Union also offered many spaces and tables where students can eat their meals in groups or alone. Moreover, there is a sports centre where students can ask about sporting activities and get information on where sports sessions are held and when. At the Students' Union, there are classrooms in which students occasionally have lectures. Also, there are spacious areas in this building designed for use by students as study areas. There are tables suitable for group study sessions and others for individuals who wants to study in isolation.

4.2.2 Sampling strategy

At this stage of the data collection, I employed a purposeful sampling strategy to recruit participants. Purposeful sampling is when the researcher specifically selecting a group of participants, allowing the researcher to collect information that is relevant to the research questions (Patton, 2002: 244; Braun & Clarke, 2013:56). All the participants were students aged between 18-28. The reason for choosing students is that they covered the required age range for this research. In simple terms, they address the research gap, as the age group of young adults are under-researched even though they consume a high number of soft drinks. Additionally, understanding the phenomenon of soft drink consumption among this group is valuable as students represent a significant proportion of the Sheffield population. Moreover, I also preferred to focus solely on this population to gain a deep and rich understanding of this phenomenon among this group rather than opting for more than one population and ending up with a shallow understanding of the research topic. This is in line with the qualitative research

principles as proposed by Anderson (2010), who argues that one of the strengths of qualitative analysis is that it aims to get more details and understand a topic in-depth.

Shove et al. (2012), in their explanation of social practice theory, pose an important question about how practitioners, the “carriers” of social practises, start to engage in a certain practice and then commit to it and become a carrier. In my research and relevant to my sampling strategy, I consider this point. As mentioned above, I chose to ask soft drink consumers about how and why they engage in soft drink consumption and what attracts them and makes them committed to it. In addition, Nicolini (2012) suggests looking at the practical concerns that influence and dictate the action of the practitioners of a social practice. By choosing soft drink consumers as practitioners in the context of this research fitted with Nicolini’s (2012) approach.

Sample size in qualitative research always tends to be smaller than that in quantitative studies and there are no established guidelines that can be applied to determine the appropriate number of participants for a qualitative study (Patton, 2002: 244). However, Bowen (2008) and Morse (2000) highlight that the researcher needs to be aware of data saturation. Data saturation is reached when obtaining further data is no longer useful and will not provide additional value (Bowen, 2008; Morse, 2000).

At this first stage of the project, I reached data saturation after collecting detailed observational and interview data from 14 students as I noticed that I had a well-established theme and collecting more became repetitive and therefore unnecessary. The table below shows the relevant participant information.

Table 2. Participant information for stage one data collection

Number of participants	Gender		Occupation	Age range
	Male	Female		
14	12	2	Student	19-28

4.2.3 Data collection methods

In observational and ethnographic research, there are different ways of collecting data, including observation and interviews (Angrosino, 2007). In stage one, I collected data mainly in two ways: observations and informal interviews. In terms of observation during stage one data collection, I spent a lot of time at the Students’ Union. Sometimes, I conducted

observations in the early morning and at other times, later in the day during lunch or after. My observations covered most of the time from 9 am to 5 pm, Monday to Friday. This first stage observation lasted for around 10 weeks over October, November, December and January. Using observation as a method to investigate soft drink consumption in my research is a valuable idea as mentioned by Nicolini (2012) whose use of social practice theory is based on observation.

During this time, I also conducted around 14 informal interviews with participants. Conducting formal interviews was not ideal at this stage as I had not gained enough empirical knowledge about the soft drink consumption to enable me to establish topic guides and question sets for formal interviews. At this stage, I was able to informally interview 14 participants between October and December 2018. In this research, informal interviews are defined as a quick chat with the participant who is consuming the soft drink in the Students' Union. I chose informal interviews for this stage because the aim of this stage was to get a general idea, or starting point, about the meanings of and reasons given for soft drink consumption. In simple terms, at this stage of the research, I wanted to obtain a broad understanding of soft drink consumption in the field where I was collecting data. As Nicolini (2012, p. 219) states 'in the beginning was the deed' (p. 219). In addition, conducting interviews follows Silver (2013), who argues that interviews are an important data collection method in qualitative research as they help the researcher to explore what people do by allowing participants to talk about it. This was the case with my research. For example, when I interviewed students, I asked them about the situations in which they consume soft drinks.

However, it is important to note that this was my first experience with qualitative research. It was also my first time conducting fieldwork and collecting data through observation and interviews. At that time, I had completed extensive reading on qualitative research, so I was extremely excited to go into the field to collect data and apply what I had learned in practice. I went to the Student Union initially interested in soft drinks, but I did not know exactly what I was going to observe. At the beginning of the data collection process, I felt like a complete outsider observing something entirely new to me. Over time, I gained more experience and started to know what data I wanted to collect and where to go and when. Furthermore, I must acknowledge that when I started collecting the data, I was a little bit uncomfortable because I was not familiar with this experience but it quickly started to feel normal.

Regarding my fieldnotes, at the beginning of the research, I did not know how to organise them or what to write but over time, I got used to the process. For example, for stage one, I started to arrange the data according to location and the date of the observation. Additionally, my ability to write field notes developed over the course of the study. As a result, there is a difference between the early and later field notes. This is because my research skills improved during the research. To illustrate, the field notes written at the beginning of the data collection process feature “normal description”. Examples of these field notes can be found in Appendix 6 under the headings “Field notes for soft drinks (sample 1)” and “Field notes for soft drinks (sample 2)”. In contrast, later field notes feature “thick descriptions”. Examples of these field notes can be found in Appendix 6 under the heading “Field notes for meal deals (sample 1)” and “Field notes for meal deals (sample 2)”. The field notes with thick descriptions enabled me to explore the phenomenon of meal deals properly. In particular, because these field notes contained detailed descriptions of my observations on meal deals, they helped me to develop an advanced understanding of meal deals and their influence on soft drink consumption. This is clearly reflected in section 6.2 where I explain in detail how meal deals can influence soft drink consumption. I was only able to offer these explanations because my field notes included thick descriptions.

My primary supervisor suggested I read two key sources to develop my research skills, in particular, to improve my descriptive skills. First, the article by Unruh (1980) entitled “The nature of social worlds” and the book by Cressey (1932) entitled *The Taxi-Dance Hall: A Sociological Study in Commercialized Recreation and City Life*. Also, one particularly influential and inspirational book that my primary supervisor suggested I read was Mol’s (2002) *The Body Multiple: Ontology in Medical Practice*. I learned a lot from this book as it helped me to develop my understanding of ethnography. In particular, the way that Mol (2002) presents her ethnographic study is impressive as the description of the findings are highly detailed and thorough. Also, this book taught me that one of the most valuable ways to obtain knowledge is by observing the phenomenon under investigation when it is “practiced” in daily life. Additionally, I learned from this book that researchers can also use interviews in ethnography alongside observations. Also, this book helped me to understand that interviews can be employed to capture information about how the interviewees practice the phenomenon we want to understand in their daily lives.

One of the challenges that I have faced during my PhD is the impact of COVID-19 on my study. Details of this can be found in sections 4.3.1, 4.3.5 and at the beginning of section 4.4. Another

challenge that I have faced during my PhD is that I have had to read widely on sociology, an area that I am not familiar with. As mentioned in the introduction, I am a dentist with a master's degree in dental public health. Therefore, learning about sociological concepts was not easy for me. At the beginning of my PhD, I struggled even to understand some basic sociological concepts but over time and with continued reading, I felt that my understanding improved.

Also, it is worth mentioning that at the beginning of the PhD I intended to conduct an interpretative phenomenological analysis along with my observational study to understand the meanings associated with soft drink consumption. However, over time and after I collected a substantial amount of data on meal deals, I decided not to conduct an interpretive phenomenological analysis and to instead focus only on the observational study. I did this for two reasons. First, because at that time, the data I had collected on meal deals was clearly going to be valuable to my study and thus stopping observations on meal deals would have been unproductive. I felt that I was heading in the right direction in my research by collecting more data on meal deals. Second, I found that I was able to capture the meanings of soft drink consumption without the need for interpretive phenomenological analysis.

The experience of conducting my PhD has been very rich and valuable as it has provided me with insight into public health, qualitative research and sociology. During the study I have conducted, I have learned many new concepts related to public health, qualitative research and sociology. Not only that, but I have also been able to apply these concepts in my thesis and sometimes link them together. An example of this is my use of social practice theory as the theoretical framework for my thesis.

4.2.4 Recruiting participants

I spent a lot of time observing the phenomenon of soft drink consumption at the Students' Union. In some instances, I would sit and watch and at other times I roamed around the building all the time taking notes. During my observations, I recruited participants there and conducted the informal interview with them. In particular, when I saw a potential participant consume a soft drink, I would gently go up to them and introduce myself and explain my research before getting their consent allowing them to participate and asking a few very quick questions about soft drinks. If they did not want to speak I quietly walked away to leave them alone.

4.2.5 Data collection instruments

Silverman's (2013) discussion about qualitative data collection methods highlights the advantages of recording interviews as this allows researchers to listen to interviewees' responses again. In my research, I used a voice recorder to record the interviews, except in the case of 2 out of 14 of informal interviews when I recorded the participants' responses by writing them down in my field notes. I did this because they did not feel comfortable being recorded. During the informal interview, I asked the participants why they were consuming a soft drink at that time and about the other times they usually consume soft drinks (Appendix 4).

In his work on ethnography and observational research, Angrosino (2007) describes field notes as a vehicle to record observations and highlights how important it is to organise these notes. This reflects how I collected the data as I used a pen to record my observations in my field notes. In my field notes, I recorded what I saw related to soft drink consumption. Furthermore, when I saw people consuming soft drinks, I recorded the time and what other practices they were doing when they were consuming soft drinks, as well as where they were consuming them. My field notes also capture the location of soft drinks in the building, that is, where they are sold and can be found in the Students' Union. Finally, in my field notes I also recorded the availability of soft drinks and the types of soft drinks sold.

4.2.6 Data analyses

I conducted the data analysis for this stage by employing three main steps. First, I transcribed all the informal interviews. Second, I followed the general guidelines provided by Hammersley and Atkinson (1983) about how to analyse ethnographic data. According to these guidelines, I started to generate meanings from my field notes and the informal interview transcripts and thus started to make sense of the data I had gathered. I felt that I had accomplished this step of the analysis after several weeks of data collection at which point I had extensive field notes (from observations) and transcripts (from the informal interviews). I started to notice that my understanding of the data was better and I was getting a clearer picture of soft drink consumption in this setting.

Additionally, another important guideline mentioned by Hammersley and Atkinson (1983) in terms of analysing ethnographic data, is that data analysis should involve an "iterative process", which means that the researcher should allow the data to influence their thoughts (Hammersley & Atkinson, 1983). I achieved this after spending a long time reading and thinking about my

data as many ideas had started to arise in my mind. Thus, I did not force the social theories to fit what I have found. I let the data I collected guide me in the first instance, then I used social practice theory primarily and actor network theory to sensitise me to key concepts and widen my understanding of the soft drink consumption phenomenon.

Therefore, after I read and re-read the data multiple times, I started to describe in detail what I had captured in relation to the phenomenon of soft drink consumption. After that, I started to realise that materials play an important role in soft drink consumption. I also realised that there is meaning behind this consumption. Most importantly, I was able to reach this point because of my previous understanding and selection of social practice theory as the guiding theory of my research. At this stage of my analysis, I was influenced by the social practice theory concepts discussed by Shove et al. (2012) as they argue that every social practice consists of three elements: materials, meanings and competence.

Another important concept that has enlightened my analyses is Shove et al.'s (2012) argument that social practices connect and coexist with each other. Therefore, in my analyses, I analysed how soft drink consumption connects and coexists with other social practices, such as studying and socialising. Also, my analyses align with Nicolini's (2012) approach to social practice theory as they involve looking at what is being done and said regarding soft drink consumption. Additionally, in my analyses in section 5.4, I use the term "performance" in the context of soft drink consumption. This is because I have been influenced by Schatzki's (2002) discussion of "practices as performances" and "practices as entities". This concept is explained in section 2.3. Moreover, in section 5.2, I explore the meanings of soft drink consumption. I decided to explore this area because of my reading of Shove et al. (2012) who discuss the concept of "meanings" in the context of understanding social practices. Overall, at this stage of the research and all other stages, my analyses were influenced by Shove et al.'s (2012) approach to and explanations of social practice theory.

My analysis at this stage was also informed by actor network theory concepts and ideas (sections 5.2 and 5.5). Specifically, throughout my analyses, I was influenced by the idea, discussed by Mol and Law (1994), that an object's meaning varies according to the context in which it is situated. So, when I analysed the data, I looked at how the meanings of soft drink consumption varied according to the context (section 5.2). I have been able to reach this finding because I have been influenced by Mol and Law's (1994) and De Laet and Mol's (2000) work on material "fluidity", which is explained in section 2.7.

Also, my analysis has, to a certain extent, been influenced by Mol and Law's (1994) thinking. Mol and Law (1994) distinguish between the two concepts of networks and fluid spaces, highlighting that the actors in a network all rely on each other and thus the absence of an actor in a network might have terrible consequences for that network. In contrast, Mol and Law (1994) point out that this is not the same in fluid spaces as no component in a fluid space is essential. In my research, I show that meals can be established without soft drinks and thus the network concept does not accurately reflect the conditions being studied (section 5.5). Also, in my results and analysis, I use some of the concepts and terms from actor network theory, such as "actor" and "network". This is evident, for example, in sections 5.2 and 5.5. I apply these terms and concepts because I have been influenced by several sources that discuss actor network theory, such as Mol and Law (1994) and Michael (2016) who explains actor network theory as proposed by many authors including Latour (2005).

However, it is important to note that using social practice theory or actor network theory as a guide for my research did not mean that when I collected the data, I forced these theories to fit what I found. This was not the case. When I collected data, I looked at, and I described, how soft drink consumption is practiced in everyday life and only after that I use these theories to sensitise me to key concepts, widen my perspective and thus enrich my analysis. Stage one of this research ended after I completed the stage one data analysis and realised that soft drink consumption is linked with meal deals. As part of the reflexivity for this research, it is worth mentioning that this was a surprising finding. I had not expected that meal deals could be linked with soft drinks but when I analysed the data, I noticed how frequently the participants connected soft drink consumption to the phenomenon of meal deals. As a result, I started to develop a more advanced understanding of the factors that can influence soft drink consumption. Also, it was a surprising finding because the discussion of the concept of meal deals in the field of public health is very limited. The next section discusses in detail stage two of this research.

4.3 Stage two: "Chasing the materials"

Stage two of this project started after I finished the stage one results and analyses, that is, after I wrote up my last theme for stage one results and analysis, which indicated that soft drink consumption is enmeshed with the phenomenon of meal deals (section 5.6). As a qualitative researcher, I decided to follow this finding regarding meal deals to get a better understanding of meal deals and soft drinks within the context of meal deals. By doing so, my data collection

strategy here follows the concept of “zooming out” suggested by Nicolini (2012, p. 228). That is, I looked in detail at meal deals as a social phenomenon.

4.3.1 Sampling strategy

I decided to explore the phenomenon of meal deals because soft drinks were so closely embedded within this context, I selected two different settings where meals deals were sold. I selected one shop in the Students’ Union and another shop outside the building to examine how this phenomenon might exist elsewhere. Additionally, I selected two websites belonging to the companies that offer meal deals in the Students’ Union Shop to collect data from these sites about meal deals.

Nicolini (2012) suggests that if a researcher is interested in materials they should zoom out and follow the materials from setting to setting. This is exactly what I did. I followed the materials of soft drink and observed them in settings where they are positioned within a meal deal to explore the dynamics of meanings, materials and competence in the context of meal deals.

I thus chose to explore soft drinks in two shops. The reason for choosing the Students’ Union Shop is that participants during the first stage of data collection referred to this shop as a key place to buy soft drinks and that these were more often than not purchased as part of a meal deal. I then selected Greggs as a second shop for data collection. After selecting the Students’ Union shop, I visited many other shops that offer meal deals inside and outside the Students’ Union. I found Greggs to be suitable because this shop’s meal deal offers are unique, and I believed I could collect rich data for analysis from this shop. Specifically, I found that Greggs applied the tax on some soft drinks when the customer buys a meal deal along with other noteworthy differences to the Students’ Union Shop. Additionally, to better understand the phenomenon of meal deals and to expand and enrich the analysis, I decided to explore the websites of the two companies that offer meal deals in the Students’ Union Shop: Tiffin Sandwiches’ website and the Sandwich King’s website.

After collecting sufficient data about meal deals in the Students’ Union Shop and Greggs through observation and from the relevant websites, I wanted to conduct further observations and collect additional data about meal deals at two more sites. Unfortunately, I was unable to do this because of the lockdown measures introduced in response to the spread of COVID-19. Additionally, at this stage, I tried my best to contact managers who work in shops that offer meal deals. I contacted eight shops in the city centre, introduced my study to the managers

there and asked them to complete online interviews about meal deals. Initially, they provided me with their email addresses so I could get in contact with them. However, after I sent the managers an email to follow up, I did not receive a response. This might be because of COVID-19-related issues and uncertainties.

Therefore, I had to redesign the last part of my study to compensate. I thus created a third research stage to complement stage two. In stage three, I decided to interview meal deal consumers rather than shop managers to expand my understanding of the meal deals phenomenon and their influence on soft drink consumption. This stage will be explained in detail in section 4.4.

4.3.2 Context and site

Here, I will describe the relevant details of the shops and the websites that I collected data from.

4.3.2.1 Students' Union Shop

The Students' Union Shop sells mainly food, drinks and stationery. In terms of food, it offers breakfast items such as sandwiches as well as pastries and meal deals.

4.3.2.2 Greggs

Greggs offers sandwiches, desserts, drinks, coffee and meal deals. It is a very specific site offering a very particular type of meal deal.

4.3.2.3 The two websites of the companies that offer meal deals: Tiffin Sandwiches' website and the Sandwich King's website

There are many meal deals types on sale in the Students' Union Shop. These meal deals are owned by different companies, but they offer their services in many shops including the Students' Union Shop. Further details of the contexts of the Students' Union Shop, Greggs and the websites will be discussed in depth in my results and analyses chapter (section 6.2), as their thick description will form part of my analyses. I have not collected data from Greggs' website because I decided to put the focus on the other two websites and examine them in-depth rather spreading my efforts over too many websites. According to Anderson (2010), one of the strengths of qualitative research is that it allows us to understand a topic extensively and in great depth.

4.3.3 Data collection methods

When discussing ethnographic and observational studies, Angrosino (2007) identifies several data collection methods including observation. Additionally, as I mentioned above, observation fits with Nicolini's (2012) approach for social practice theory. I collected data in this stage by observation only. I spent over three weeks collecting data from observations of the Students' Union Shop. I visited the shop from 5 August 2019 to 29 August 2019 and recorded information about the meal deals being sold. Next, I visited the websites of the companies that offer the meal deals sold in the Students' Union Shop and collected data on these companies, including information about their goals and the services they offer. I also collected data about anything on this website related to meal deals and how meal deals are discussed on the sites. I spent around one week collecting data from the websites. Regarding Greggs, I collected data from this shop for around one week in February 2020.

As part of reflexivity in this research, it is worth mentioning that gathering data from Greggs (the second shop) was much easier because I had gained confidence regarding how to collect data and what to collect and analyse. The challenging part was that I was collecting data outside the Student Union. In the Student Union building, it was more comfortable and easier to collect data because I am a student at the university and thus familiar with the atmosphere and the surroundings there. In contrast, collecting data from outside the Students' Union was a bit challenging because I was unfamiliar with the area. At first, I was shy when collecting data in Greggs. To overcome this feeling, I introduced myself to the manager in the shop and explained that I was a PhD student collecting data on soft drinks and meal deals.

4.3.4 Data collection instruments

Hammersley and Atkinson (1983) describe field notes as a way to record observational data. At this stage of my research, I used my field notes to record the data about meal deals. For example, I wrote down the name of the meal deal items, price and sugar content.

4.3.5 Data analyses

The goal of the data analysis conducted in this stage was to explore the phenomenon of the meal deal in-depth and the position of soft drinks within this phenomenon and to determine if meal deals influence soft drink consumption. When I analysed the data from the Students' Union Shop, I sought to provide a thick description of meal deals' components. Undoubtedly,

social practice theory enlightened these analyses as providing thick descriptions of meal deals and the position of soft drinks within their different contexts provides information about the materials that constitute this practice and specifically focuses on how a meal deal is ‘assembled’ through marketing in the shop. Shove et al. (2012) argue that material is an essential element of any social practice, while Nicolini (2012) suggests that, in social practice theory, if the focus is on materials, then a wide range of research questions can be addressed, including how the materials are connected to other social practices. My data collection and analyses in this stage of my research therefore focused on the materials of soft drink consumption and are thus influenced by the ideas regarding materials put forward by Nicolini (2012) and Shove et al. (2012).

This stage came to an end when COVID-19 hit and the National Lockdown took place in England. I was lucky in that I had collected enough data on meal deals in the Students’ Union Shop and Greggs but unfortunate in not being able to examine meal deals in other settings which is what I had planned to do. This stage came to an end when COVID-19 hit and the National Lockdown took place in England. Nor was I able to chase the materials further up the chain into marketing departments. As I said above in section 4.3.1, at this point, I was forced to redesign the last part of my study and create a third and final stage of the project. The redesign introduced “stage three”, which is explained in the next section.

As a PhD student at the School of Clinical Dentistry, my project has been impacted by the COVID-19 pandemic. Barabari and Moharamzadeh (2020) state that the COVID-19 pandemic has had an evident impact on the field of education. In particular, education has been impacted by the regulations and restrictions imposed because of the pandemic, such as social distancing, which limits face-to-face interaction (Barabari and Moharamzadeh, 2020). In response to these restrictions, educational institutions including universities cancelled in-person teaching and moved lessons and other communication online (Barabari and Moharamzadeh, 2020).

Sah et al. (2020) also discuss how COVID-19 has impacted education, in particular how did it has impacted researchers and PhD students. During the COVID-19 pandemic, students and researchers have faced a lot of obstacles and difficulties to complete their studies and research within the required time (Sah et al., 2020). This has been due to the regulations imposed during the pandemic such as lockdowns and social distancing preventive measures (Sah et al., 2020). Many students and researchers have had to adjust their study designs, in particular, the way they collect data, to accommodate COVID-19 rules (Sah et al., 2020). Roberts et al. (2021)

highlight the impact of COVID-19 on qualitative projects as it has been difficult to conduct face-to-face interviews because of the preventive measures in place.

Upadhyaya et al. (2020) conducted a study to examine the impact of COVID-19 on postgraduate studies, in particular, how the pandemic impacted those seeking to undertake a postgraduate degree in Orthopaedics in India. Questionnaires were distributed to participants to investigate the effect of the pandemic on many things including postgraduate students' dissertations (Upadhyaya et al., 2020). The results of this study revealed many interesting findings with 71.6% of the participants indicating that they have faced obstacles in their projects because of COVID-19.

Barabari and Moharamzadeh (2020) explore the impact of the COVID-19 pandemic on the dental field and how the pandemic led to the cancellation of the International Association of Dental Research Conference that was to be held in the US in 2020. The authors also discuss the impact of COVID-19 on dental research. The restrictions imposed affected the unnecessary dental research undertaken in clinics, lab research and, more generally, the projects and research of postgraduate dental students (Barabari and Moharamzadeh, 2020). Researchers were forced to use online methods or conduct other work in line with the restrictions, such as literature reviews (Barabari and Moharamzadeh, 2020). Similarly, Marinoni et al. (2020) state that during the pandemic, many researchers were unable to work at labs and some researchers had to change the direction of their work.

In their research, Sah et al. (2020) talk about the difficulties and obstacles for those researchers whose research requires travel, an activity that has been heavily restricted during the pandemic and poses a real risk of infection with COVID-19. These researchers have had to think carefully about redesigning their studies and adopting other ways to collect data rather than in-person methods, particularly when it is uncertain when the COVID-19 pandemic will end (Sah et al., 2020). In this context, virtual tools such as Google Hangouts, Zoom and Microsoft Teams have offered a lot to researchers (Sah et al., 2020). These virtual tools have helped researchers to complete their research and projects online (Sah et al., 2020).

Bick et al. (2020) conducted a study that covers various methodologies including qualitative research. One of the aims of this study was to understand how PhD candidates who are conducting qualitative research and had aimed to undertake in-person data collection have been affected by the COVID-19 pandemic (Bick et al., 2020). Their results reveal that one of the most difficult situations faced by PhD students has been collecting data from the field and

participants given social distancing and lockdown restrictions. Another important finding is that many of the PhD students studied changed their study designs and adjusted their project timeframes to accommodate the COVID-19 situation (Bick et al., 2020). Additionally, some of the participants (PhD candidates) considered collecting data online instead of in person (Bick et al., 2020). In addition to the above, Marinoni et al. (2020) evaluated how COVID-19 has affected higher education at more than 424 universities around the world. The results show that around 80% of these universities have been affected in various ways with 52% reporting that their academic projects may not be finished because of COVID-19 and 21% stating that their academic projects have ceased completely (Marinoni et al., 2020).

My study has been affected by the lockdown and preventive measures related to COVID-19. Briefly, I was unable to conduct more observations in other settings due to the lockdown. Therefore, I had to redesign my study and switch to conducting online interviews. More details on the impact of COVID-19 on my research can be found in section 4.3.1, earlier in this section (section 4.3.5) and at the beginning of section 4.4.

4.4 Stage three: The meaning and function of meal deals in everyday life

I started on stage three of this project after I completed the results and analyses for stage two, in particular, after I gained a deep understanding of the phenomenon of meal deals and soft drinks by observing it in the Students' Union Shop and Greggs. At this point of the project, and as a result of the COVID-19 lockdown, I redesigned my study and decided to investigate the phenomenon of meal deal from another perspective, the consumer perspective. I did this to widen my understanding of the meal deals phenomenon and their influence on soft drink consumption. Understanding the phenomenon of meal deals and the position of soft drinks within them from the participants' perspectives is important because, as Shove et al. (2012) explains, in general, individuals are the carriers of social practices. Therefore, I believed that interviewing the study participants would provide me with valuable information about the materials, meanings and the competence relevant to meal deals and soft drinks.

4.4.1 Sampling strategy

In the third and final stage of this project, I first employed a purposeful sampling strategy as I started to recruit some participants who consume meal deals. I then employed a snowball sampling approach as a second step. Snowball sampling occurs when one participant has completed an interview and is asked to guide the researcher to other participants (Patton, 2002).

I asked two of the participants to guide me to others who consume meal deals and then interviewed them. The reason for choosing meal deal consumers is that they are the ideal group who can allow me to collect rich data that is relevant to meal deal because of their experience with meal deal consumption. Moreover, according to Nicolini's (2012) methodologies for social practice theory, he suggests exploring what is being done and said in relation to the practice under investigation. At this stage of my project, my approach aligns with Nicolini's (2012) as my study will reveal what the participants say and do about meal deals and soft drink consumption within them.

However, it is important to note that at this stage I analysed a total number of 16 interviews, only 7 of which were new participants, the remaining 9 were interviews had already completed at stage one data collection. At this point, I reached data saturation on the meal deals phenomenon and its influence on soft drinks. I noticed that I had a well-established theme and collecting more data was unnecessary. The table below shows the relevant participant information.

Table 3. Participant information for stage three data collection

Number of participants	Gender		Occupation	Age range
	Male	Female		
16	7	9	Student	19-33

4.4.2 Data collection methods

Braun and Clarke (2013) assert that the most common form of interview in qualitative research is the semi-structured interview in which the researcher prepares a topic guide ahead of conducting the interview but does not stick firmly to pre-prepared questions and has a level of flexibility. At this stage of the research, as a data collection method, I employed semi-structured interviews to collect data from the participants. I did not used an open-ended interview because I did not want the participants to discuss too much outside the topic of meal deals. Semi-structured interviews allowed me to guide the participants to talk about meal deals and soft drinks but also give them the freedom to take around this topic to a certain extent. I conducted these interviews over May and June 2020.

4.4.3 Data collection instruments

Miller (1995) suggests that phone interviews are a good solution when face-to-face interviews cannot be conducted. Braun and Clarke (2013) argue that virtual interviews in qualitative research, including telephone and online interviews, are not inferior to face-to-face interviews but are simply another way of conducting an interview. In my research, the 7 new interviews were collected virtually and over the phone rather than face-to-face due to the outbreak of the coronavirus and the social distancing guidelines in place at that time. Five out of the seven interviews were conducted using online platforms such as Zoom and Google. The remaining two interviews were conducted over the phone. I used a voice recorder to record all seven interviews.

The interview topic guide I used mainly focuses on meal deals and soft drinks (Appendix 5). Conducting virtual interviews was in line with my intention to apply social practice theory as part of my approach to understanding the social practice of soft drink consumption. This is because, according to Nicolini (2012), it is vital to explore what people are saying about a practice to understand it. Therefore, virtual interviews were appropriate as they allowed me to examine what the study participants had to say about meal deals and the position of soft drinks within them. They were also the only way to collect data during the pandemic.

However, according to Sah et al. (2020), there are some challenges associated with virtual interviews, for example, the total lack of access to the internet or the cost of accessing the internet (Sah et al., 2020). Another limitation discussed by Sah et al. (2020) is that some PhD students prefer to conduct in-person fieldwork and thus avoid virtual interviews. In my research, I have not experienced any of these challenges. All the participants have access to the internet and I gathered fieldwork data before the virtual interviews. As a result, my interviews went very smoothly.

At this stage of the research, I had more experience with data collection. By this time, I had collected different kinds of data such as observation and interview data. However, during this stage, I had to shift from in-person interviews to virtual interviews. At first, I thought that this would be a challenge because it was new to me, but when I started collecting data virtually, I found it a convenient and simple way of gathering information. This is because I found collecting data virtually less stressful as there is no face-to-face interaction. Also, it was convenient because I could collect data from my apartment, a place where I am comfortable.

4.4.4 Data analyses

Silverman (2014), in the context of qualitative research, suggests that it is difficult to remember the tiny details of a conversation and therefore transcribing interviews can help to preserve their content. In my research, before I analysed the data collected in this third and final stage of the project, I transcribed the interviews following Silverman (2014). Again, following social practice theory I wanted to analyse the function and the meanings of meal deals as soft drinks are part and parcel of these deals. As Nicolini (2012, p 221) states, practices are “knowledgeable accomplishments” (p. 221). What this means for my research is that meal deals have certain purposes and functions. For example, when the study participants choose these deals, they have reasons for doing so. Additionally, understanding meal deals will help us to better understand soft drinks as they are part of these meal deals. Therefore, I have described in detail what I have found in terms of the function and the meanings of meal deals.

This means that during my analyses, I considered soft drinks as the materials that are embedded in the phenomenon of meal deals. I adopted this idea from Shove et al. (2012) who suggest that certain materials connect different practices. In my analyses, I adopted this idea to explore the connection between soft drinks as materials and meal deals. Also, a large part of this analysis focused on the meanings of the meal deals. So, when I analysed the interview data, I looked for the meanings of meal deals, and according to Shove et al. (2012), meanings are an essential element of any social practice.

It is important to note that at this stage of the analyses, although I was influenced by social practice theory, the way I handled the data to some extent aligned with the process of thematic analysis as described by Braun and Clarke (2006). Thus, I first became familiar with the data I collected by reading the transcripts many times. I then started to code the data line by line until I had coded all the data. Subsequently, I started to generate themes from this coding. In particular, I started to group codes under one theme. Next, I revised the themes I had produced, and I edited and rearranged some of them. In the fifth step of the thematic analysis, I ensured each theme had the right name, that is, one that reflects the content of the data that comes under this theme. Finally, I wrote the report of the themes analysed including the full details of the analyses.

4.5 Reflexivity

Reflexivity is defined as self-examination or critically evaluating the position of researchers in terms of their potential to unknowingly influence the research process, including critically examining the relationship between the researcher and the topic being researched (Finlay, 2002). For example, a researcher may study a topic that means they share characteristics with the study participants, and this may influence their analysis and findings (Braun & Clarke, 2013).

I have reflected on how my research took this direction and have found that the focus of public health literature on the negative health consequences of excessive soft drink consumption, including obesity, diabetes and dental caries, was what first motivated me to examine this phenomenon. Therefore, my research aimed to explore the phenomenon of soft drink consumption as a social phenomenon. One of the key elements that prompted this research to follow the direction it did was my introduction to the sociological background and approach to understanding this phenomenon. In particular, learning about social practice theory as the sensitising theory for this research significantly impacted on the direction of this study as it made me focus on the practice itself and not the individual or the social structure, as is the case with the existing public health literature. Social practice theory allowed me to go deeper to better understand the meanings and the materials and the competencies related to soft drink consumption. Also, choosing social practice theory allowed me to think about the other practices connected to soft drink consumption. If I had not selected this theory, this research would have gone in another direction.

Another important point is that I have approached and explored soft drink consumption from a social perspective. This way of understanding soft drink consumption is different from the biomedical model and seeks to understand this phenomenon as something that happens in daily life. This is reflected in the observations, the topic guide and interview questions, which are not interested in whether participants see soft drink as healthy or not, but focus on soft drink consumption as it happens in everyday life highlighting the influence of the meanings and the materials of this phenomenon. Thus, the participants' answers were on these topics and they were able to talk about soft drinks and their connection with meal deals. These are the main elements that allowed this research to take the shape and direction it did. Moreover, it is important to note that I am a dentist and have my own perspective on sugar, namely, that excessive consumption of sugar is bad for oral and general health. However, I have tried my

best to minimise the influence that my professional experience as a dentist may have on my research.

My interview questions do not refer to the health impact of soft drinks and the sugar they contain and do not aim to understand what participants believe concerning the negative health consequences of excessive soft drink consumption. Instead, questions focus on soft drinks and meal deals as a daily practice. Also, in terms of reflexivity, I should mention that I sometimes consume soft drinks and understand this kind of experience and thus I can understand the participants' experience regarding taste as a meaning behind soft drink consumption. In contrast, my experience with meal deals is very limited and thus I do not fully understand the function and meaning behind the consumption of meal deals.

4.6 The strategies applied to improve the trustworthiness of this qualitative study

Guba (1981) and Lincoln and Guba (1985) identify several criteria to consider when it comes to evaluating and verifying qualitative research. These criteria include credibility, transferability, dependability and confirmability (Guba, 1981; Lincoln and Guba, 1985). The following paragraphs define each of these elements and show how they can be achieved in qualitative research. I then discuss how these strategies have been applied in this study.

4.6.1 Credibility

Credibility is defined as the extent to which the information and the data gathered from the research participants and the way the research undertakes to present them is true (Polit and Beck, 2012). There are different ways to achieve credibility in qualitative research (Guba, 1981; Lincoln and Guba, 1985). First, the researchers must spend a lot of time in the field to gather accurate information (Krefting, 1991; Lincoln and Guba, 1985). Triangulation is another way to achieve credibility in qualitative research (Shenton, 2004; Krefting, 1991). It is defined as the process of collecting data utilising various methods such as observation, interviews and focus groups (Shenton, 2004). In my research, I have taken significant steps to ensure that I achieve credibility. I have attempted to spend enough time in the field to collect the necessary data. For example, I spent 10 weeks observing at the Student Union during the first stage of this research. Additionally, I conducted 21 formal and informal interviews with the research participants to get as much information as possible to support this research. Moreover, in this

study, I have employed the concept of triangulation to increase the credibility of the research as I have collected data through interviews and observation.

4.6.2 Dependability

Guba (1981) explains that the concept of dependability refers to the extent the findings of the research have the characteristic of being consistent over time. There are some strategies to consider that can increase the level of dependability in qualitative research. Krefting (1991) suggests that dependability can be improved by applying the concept of triangulation, that is, the use of different data collection methods. If there is a shortcoming in one of the data collection methods, using another method can compensate (Krefting, 1991). Also, dependability can be achieved when the research process is evaluated step-by-step by a third party with the relevant expertise (Krefting, 1991).

In this study, I have completed many steps to improve its dependability. First, I have gathered data using different methods, including observation and interviews. Second, my research process has been carefully evaluated at each step by my supervisors.

4.6.3 Confirmability

Confirmability is defined as occurring when the findings of research originate solely from the data that has been collected in the study and they should not reflect the researchers' positions (Tobin and Begley, 2004). Researchers conducting qualitative studies can achieve confirmability by presenting sufficient participant quotations reflecting the themes that have been generated (Cope, 2014). In this qualitative study, I attempt as much as possible to use enough quotations to represent the themes of the study.

4.6.4 Transferability

Tobin and Begley (2004, p. 392) state that the concept of "transferability" "refers to the generalisability of inquiry". Krefting (1991) argues that to achieve transferability, researchers should provide their readers with a detailed description of research settings and participants so readers can evaluate the extent to which the research can be applied to other settings. In my research, in particular, in Chapter 4 on the materials and methods used in the study, I discuss the context of this study in rich detail in terms of the settings that I have collected data in and the research participants. I have attempted as much as possible to record all relevant

information about the context of this qualitative study so the reader has all the information they need to decide to what extent this research can be applied in other places and among other groups of people.

4.7 Ethics

From an ethical perspective, there are many concepts that the researcher should consider when conducting research. These include “respect”, “competence”, “responsibility” and “integrity” (British Psychological Society, 2009). The concept of respect in research ethics covers several aspects including taking consent from the participants for their participation, ensuring the participants’ privacy and confidentiality and increasing the participants’ awareness of their rights, for example, they should know that they can withdraw from the study at any time (British Psychological Society, 2009). The second concept of competence refers to the researcher’s awareness of research ethics and the associated issues (British Psychological Society, 2009). The third concept is responsibility according to which the research should not cause any harm to anyone (British Psychological Society, 2009). The fourth concept is integrity, which refers to the need to manage the data honestly (British Psychological Society, 2009). In this study, I have taken several actions to ensure that I have followed the ethical guidelines properly. I will discuss the steps I have taken in the following sections.

4.7.1 Ethical approval

Ethical approval for this project was obtained from the Ethical Review Committee of Sheffield University in October 2018 (Appendix 3).

4.7.2 Ethical challenges

During my research, I have faced many ethical challenges. One of the challenges I have faced is that two of the participants preferred that I record their answers by taking notes rather than by recording our conversation. In response, I was flexible and did what they preferred. In addition, when I went to collect data from one of the shops, as usual, I spoke to the manager before doing anything but he politely refused. So, I immediately left and did not collect any data from that shop or from any of that company’s other branches.

A further challenge I have faced is that I was unable to conduct the final interviews face to face because of the COVID-19 pandemic and the university regulations designed to protect

participants and researchers. I thus had to change the way I collected data by implementing virtual interviews.

4.7.3 Negotiating access

Before I conducted any observations in the Students' Union, the first setting I collected data from, I asked my supervisors to help me negotiate access to this institution. My supervisors contacted one of the managers there and informed them that I am a researcher and would like to collect data in the building. The managers then gave me permission to gather data in the Students' Union. Regarding Greggs, the second setting in which I collected data, I went first to the shop manager and introduced myself as a researcher and politely asked if they would allow me to collect data in their shop. Happily, the manager agreed.

It is worth mentioning here that the University of Sheffield (2018) argues that ethics are more than just following practical steps and recommended procedures, they are something that should have great significance for researchers and that researchers should undertake and agree on. Therefore, my ethical commitment involved much more than getting consent from shop managers to conduct my research. I was also very careful during the data collection process. For example, when I collected data from shops, I was careful not to disturb the customers there.

4.7.4 Consent

In terms of consent, there are a number of ethical principles to consider, which are described by the University of Sheffield (2018, 2018a). In this section I will illustrate how I have applied these principles across my project.

In terms of the observations that I have conducted, when I was observing the Students' Union, and Greggs, I hung a visible lanyard with my name and department on it indicating that I am a PhD researcher. Also, before I went to the Students' Union building, I got the manager's consent to access the building and conduct my investigations. Additionally, I told the manager in Greggs that I was a researcher collecting data on meal deals and soft drinks and got their consent to collect data in their shop.

Moreover, I informed all participants that I have interviewed about all issues related to the study. In particular, I provided the interviewees with an information sheet (Appendix 1) that clearly explains the study before I took their consent. Most importantly, the sheet states that I

am a PhD student at Sheffield University and informs the potential participant what will be done with the data they provide and why they have been chosen to participate.

Another important ethical guideline relevant to the concept of consent that I considered in my research is the concept of withdrawal from a research study. Before I got the necessary consent from the study participants, I gave them the right to refuse to participate and told them that even if they did give consent they were free to withdraw from the study at any time before the data analyses stage without any problems. My information sheet clearly states that anyone can withdraw and all data that has been recorded about them will be deleted. I also provided my contact details in case they change their minds later and opt to withdraw.

The University of Sheffield (2018) states that when researchers undertake research, every procedure and step should follow four concepts: “honesty”, “integrity” and “minimal possible risk” in terms of study population and researchers and showing “respect” for the study population, their background, culture and traditions. In this section, I detailed the steps that I followed to get consent. However, as a researcher, I understand what the University of Sheffield (2018) means when it stated that research is much more than following practical ethical steps. For me, as a researcher, and throughout the research process, I was respectful towards and honest with participants when conducting interviews. For example, I provided them with the participant information sheet and chatted with them about my research before getting their participation consent to make sure they clearly understood my project. Also, I included my contact details on the information sheet and asked the participants to contact me if they changed their minds about participating.

Finally, the University of Sheffield (2018a) notes that in some studies, such as those that involve observing people’s behaviours in public spaces, getting consent from every participant is unrealistic. Therefore, according to the University of Sheffield (2018a), in such cases, researchers should follow specific ethical guidelines (The University of Sheffield, 2018a). These guidelines include: 1) the study can only be undertaken in public spaces, 2) where it is applicable, researchers must have consent to conduct their research from the people or “authorities” who are responsible for these spaces, 3) researchers have to contact “stakeholders”, if it is applicable, and let them know about the study, 4) researchers should completely anonymise all individuals to ensure confidentiality (except “public figures acting in their public capacity”), and 5) researchers should respect people’s privacy and cultures (The University of Sheffield, 2018a).

In the first stage of my research, I conducted observations in public spaces, in particular, in the Students' Union. Therefore, in stage one, it was not possible to get consent from the study participants, that is, the people I observed. As such, I followed the abovementioned guidelines mentioned by the University of Sheffield (2018a) for studies involving the observation of people in public spaces. Specifically, my study nature can only be conducted in public spaces. Also, I got consent from the manager of the Students' Union (the stakeholders in my case) to conduct the observations. I fully anonymised all participants and I was very respectful to people when I was collecting the data.

4.7.5 Safety

Responsibilities concerning safety have been carefully considered during this research. While this kind of study is not expected to cause any harm because it does not focus on a sensitive topic, I nonetheless informed the participants that if they felt uncomfortable about taking part in formal or informal interviews, they could refuse to participate from the outset and would be excluded from the study. Furthermore, as mentioned above, the participants were told that they were free to withdraw from this study at any time before the data analysis stage.

4.7.6 Data confidentiality

I do not identify any participants at any point in my research. This approach agrees with Gavey and Braun (1997) who argue that confidentiality is more important when studying a specific group of people as they can more easily be identified. According to Kaiser, (2009) data should undergo an additional process to ensure the confidentiality of participants. Specifically, pseudonyms should be used and all related information used to identify participants, such as addresses, should be deleted (Kaiser, 2009). In this research, I have used fake names for the participants' quotations and have anonymised their real names.

4.7.7 Data management, storage and security

For data management and storage, I have employed several measures to protect the participants' confidentially. In terms of the field notes, I have stored them and shared them on Google Drive with my supervisors. Later, they will be stored in the University of Sheffield data repository. In terms of the audio recordings, I have uploaded anonymised transcripts of the interviews that I have conducted to Google Drive and shared them with my supervisors. Additionally, the computer that I use to access Google Drive is password protected.

4.8 Summary

This chapter discusses in detail the materials and methods used in this study. It shows that this research has been conducted over three stages: “zooming in”, “chasing the materials” and “the meaning and function of meal deals”. In each stage, I discuss the context, sampling strategy, data collection methods, data collection instruments and data analyses involved. This chapter then goes on to discuss the strategies that I have applied to improve the validity of this study such as using different data collection methods and describing the context of this research in detail. This chapter ends by discussing the ethical issues relevant to this study. The next two results chapters present the findings of this qualitative study on soft drinks and meal deals.

Chapter 5: Results (Part 1): Soft drink consumption as a social phenomena

5.1 Introduction

The aim of this study is to explore soft drink consumption as a social phenomenon in the context of everyday life. The results of this thesis can be divided into two main parts: soft drinks and meal deals. Therefore, this chapter, Chapter 5, primarily concerns the results of part one of this study, which is about the phenomenon of soft drink consumption. The second results chapter, Chapter 6, concerns the findings relevant to meal deals. However, it is worth mentioning that there is some overlap in the soft drinks and meal deals findings. Therefore, while part one of the results mainly focuses on soft drinks, the link between soft drink consumption and meal deals is also discussed. Likewise, Chapter 6 primarily presents findings about meal deals but it also explains how meal deals can drive people to consume soft drinks.

This chapter indicates that the meanings associated with soft drinks vary according to the context. Additionally, it shows that soft drink consumption as a social practice is not performed in isolation but coexists with other social practices such as eating meals, studying and socialising. Then, it goes on to show the temporal and spatial arrangements of soft drink consumption. Finally, this chapter ends with two headings that introduce the idea that soft drink consumption is linked with meal deals.

5.2 Soft drinks as a network of qualities

This theme reveals the meanings of soft drink consumption and how they vary according to the context. It is important to note that I have reached these findings because I have been influenced by the ideas of Shove et al. (2012), Mol and Law (1994) and De Laet and Mol (2000). Further details on the data analyses relevant to these results can be found in section 4.2.6.

Soft drinks reveal a multiplicity of characteristics across different settings. In other words, when soft drinks move from one context to another, from one association to another, some of their features are constructed or emphasised, others disappear. During my observations, one of the participants I interviewed about her reasons for consuming soft drink with food responded:

“Got something hot and uh and wanted to get something cold [soft drink] to contract it. So, hot sandwich and soft drinks works for me.” (Sarah)

If we take a meal as a network and corresponding context in which soft drinks are embedded as an actor within this association, then soft drinks here act as an object the presence of which with the meal add something to the meal. This provides an equilibrium, so the overall results

of the meal and the taste suit the consumer. According to Sarah's description, soft drinks provide a balance within her meal. She prefers to counteract the hot temperature of the food with the cold temperature of the soft drinks, and this seems to provide her with a final result that works for her, perhaps an optimal taste. In the next example the soft drinks also act as a balancing component in the meal, but here, the coldness of the soft drinks is not emphasized.

In the statement below, Mike explains his consumption of soft drinks with food, saying:

"I was eating chicken with like a lot of sauce before, so I think, I do not know. I like the combination." (Mike)

Another participant shared Mike's point of view about the benefits of combining soft drink with a meal:

"I tend to go for soft drinks, like "Pepsi or Coca-Cola, because I quite enjoy the meal in general because I feel like the soft drink enhances the food I am eating ... So if you ask me to drink something just alone, it's completely different from what I eat from the meals. It's because I like the pairings of the drink with the meal." (Hani)

Hani also believes that soft drinks add something to food and enhances the meals he eats. Like Mike, Hani enjoys the combination of soft drink with food.

It seems that the demand for soft drinks in Mike's case is for something very delicate. It's not about temperature this time, but about something to deal with the sauce, so the resulting mixture will provide better results, perhaps a better taste, too. In both previous cases, soft drinks reflect just one of its multiple features, which is to act as a great accompaniment to a meal and add to and balance something in food to improve the taste. Interestingly, for one consumer of soft drinks, its cold temperature is emphasized while for another, soft drinks offer a more delicate contribution to the meal, which we can understand but is difficult to describe. In addition, when I interviewed Susan and asked her about her experience as a soft drink consumer and her reasons for consuming soft drinks with meals, she replied:

"It has a taste, so it tastes a lot more better than water" (Susan)

Susan's preference for soft drink over water is straightforward, soft drink tastes better than water.

If we take smoking as a different network and context, soft drinks consumption may appear differently here. In this case, soft drinks no longer counteract the heat of something, nor do they deal with the flavour of tobacco like with the chicken sauce. This time soft drinks act as a lubricant. Emma indicates the reason why she consumes soft drinks when she smokes by saying that:

“When you smoke cigarette your throat gets dry.” (Emma)

Emma needed the soft drink not for its coldness, but for its lubricating feature as she felt that her throat was dry because of the smoke and she wanted to soothe it with a soft drink.

Within other associations, one material component of the soft drink, in this case sugar, links closely with the objective of the consumer. In this case it is not the taste that matters. This situation arises when an actor needs energy, perhaps when there is a compelling need to concentrate, and when it is a necessity, during classes, for example:

“I sometimes drink them before a lecture to keep myself awake” (Jack)

The consumption of soft drinks as a boost is not limited to those moments before lectures or classes when the mind needs energy, it also occurs when the physical body is tired and requires energy. Before doing physical exercise is one deed where soft drinks are in demand as a material component because of their ability to energize:

“Before gym maybe, when I feel low.” (Linda)

In this context, soft drinks appear as an “energizer,” a way to boost the body and mind when people complain of mental or physical fatigue. Here, soft drinks provide fuel, and their taste, temperature and lubricating ability no longer matter. Manal’s experience supports the claim stated above when she talked about soft drinks act as energising:

“Sometimes. Say, if I’ve got an assignment due, then I do have Coca-Cola, but I try to stay away from it. Because when I have Coca-Cola, it keeps me up longer. So, I can’t sleep when I have Coca-Cola. Same with the original Lucozade. I can’t sleep straight away. So, I only have that if I’m desperate, where I’ve got an assignment or I’ve got an exam next day and need to stay up to revise.” (Manal)

Manal has found that soft drinks give her a boost and this can help her to complete her studies. In particular, in Manal's experience, soft drink can keep her awake and she uses this extra time to study.

Let us move on to other association in which soft drinks not only deal with the hot temperature of food, like in Sarah's case, but with the heat of the weather:

"So, like today it's not overly cold, so I really want to cool down, so I have a fizzy drink."

(Jacob)

This participant seeks to consume soft drinks when the weather is not cold, when it is hot. According to his description:

"where the sun's out." (Jacob)

it is time for:

"Something that's fizzy, something that's sugary, something that's cold." (Jacob)

Perhaps when the weather is too cold, at least for this participant, there will be no need for soft drinks. Other participant gave the same response, saying:

"You know when it's hot?... I want a really cold drink, then I tend to go for something like

Oasis." (Manal)

Manal explains that she tries to counteract hot weather by drinking a cold soft drink. The meaning of soft drink consumption is neglected in the literature. Most studies focus only on the taste of soft drink as a driver of its consumption. This gap in the literature is because most of the studies available are quantitative and one of the limitations of quantitative research methods is that they do not allow the study participants to speak openly about their experience and express themselves freely.

In other contexts, soft drinks work like water and is used to quench thirst. Many participants state that they consume soft drink when they are thirsty. Mia says that she consumes soft drinks:

"If you're thirsty or whatever." (Fiona)

Other participant gave the same response, saying:

“When I am thirsty.” (Ben)

On the other hand, one participant talked about the meaning of soft drink consumption in terms of soft drink’s ability to leave you feeling refreshed:

“I think soft drink is make me fresh during a day.....but there is some fizzy that wake your soul up, I would say. Yeah. This is what I like is I feel very fresh when I have it.” (Tiffany)

Soft drinks leave Tiffany feeling revived and this is the reason why she consumes soft drink.

To conclude, what we can see here is that as soft drinks move from one context to another, from one association to another, for example, from meals to the gym, one of their features will be highlighted and others will disappear. Soft drinks act in a certain way when they come with food (to provide an overall better taste) and take a different form, and act in a different way, when they come before lectures or the gym (providing an energy boost). Soft drinks therefore have a double fluidity. They are fluid in their physical properties as well as fluid in their nature. The latter type of fluidity provides soft drinks with the feature of being adjustable to the context in which they are embedded. As such when soft drinks move from one association to another, some aspects of them remain the same, others change. For soft drinks, this means that their physical properties stay the same in different contexts, but their meanings change.

“For if we are dealing with ‘anaemia’ over and over again, something that keeps on differing but also stays the same, then this is because it transforms itself from one arrangement into another without discontinuity”. (Mol and Law, 1994, p. 664)

5.3 The spatial and temporal arrangement of soft drink consumption

Soft drink consumption involves an element of “performance” is not accomplished quickly but tends to take place and endure over a long time and is embedded within a range of daily practices. As long as the practice takes a while to be performed by the consumer (performer), this means that the consumption of soft drinks can take place within a range of practices across a wide spatial area. This is because the performer starts the performance (studying, eating lunch, chatting to friends) in one setting, but over time, naturally moves to other settings performing other practices of which the soft drink is but one material component. In this way, a consumer will take the soft drink consumption with them to a new setting.

The data generated from my observations and interviews depict this unique characteristic of soft drink consumption, that it tends to last a long time, particularly in comparison with food consumption:

A participant was eating, consuming a soft drink and studying simultaneously. The food has been consumed quickly, but the participant was consuming the soft drink slowly while using their laptop. (Observation diary)

According to the above observation, this participant was performing three practices at the same time. Soft drink consumption was initiated in parallel with food consumption within the social practice of having lunch. However, food consumption was completed very quickly in comparison with soft drink consumption, which continued over time and long enough to accompany another social practice, in this case studying (using their laptop). In simple terms, participants tend to finish their food faster than their soft drink, which they continue to drink over a longer time. Soft drink consumption can thus cover a wide temporal scale in everyday life, at least when it is embedded within a range of social practices.

A similar situation occurs daily in area one within Students' Union, at lunchtime. As my observation diary records:

In area one at lunchtime, people gather so they can eat their meals and lunches. The place is crowded, noisy and full of soft drinks, food and social interactions. Following a period of time, at approximately 1:45 pm, people usually leave this space in groups, leaving the finished food on their tables, but still consuming their soft drinks. (Observation diary)

Here, the social soft drink consumption is again performed over a long time, longer than food consumption practices, which end quickly. Therefore, soft drink consumption practice occurs in parallel with, in this case, interaction practices over a longer period. One explanation of why the consumption of soft drinks as a social practice occurs over such a long period of time is that it is frequently not the performer's priority and so the material of the soft drink can be fluidly transferred between practices. Compared with consuming food or studying, for example, finishing a soft drink is not a main concern:

In area two in the Students' Union, some participants were studying with soft drink bottles in front of them. They were very busy and engaged with their work, and soft drinks bottles or cans were ignored on their tables. (Observation diary)

As can be noticed from my observations, soft drink bottles or cans are forgotten when the performer is engaged in practices such as studying. The soft drink becomes their last concern and they give priority to other materials over the soft drink. As such, the material (the soft drink) will not be depleted at a fast rate. Using the language of social practice theory, the material is one of the main components of the practice being performed and, in this case, as long as the material exists, it will supply the practice and make the practice survive and endure longer. My observations reveal that soft drinks are not only ignored when the consumers are engaged in studying but also when they use their mobile phones, which distract them for long periods. Some bottles or cans are transparent and it could be seen that only very little has been consumed, so little enough to ask why they bought it.

Soft drink consumption not only has the characteristic of being performed over a long time, but also of being distributed across a wide spatial area, across different locations. In simple terms, if soft drink consumption takes time to be completed, this will give soft drink consumption another ability, which is mobility. This is simply because the performer or consumer will move from one space to another over time and therefore the material (the bottle or can of soft drink) will also move. One interview reflects this phenomenon very clearly:

“Start here with lunch [consuming soft drink at the Students' Union] then back home, ya just keep drinking them.” (Ava)

Ava here started to consume her soft drink with food during a meal consumed in the Students' Union. She explained that she still had some soft drink left after she has finished her lunch. Now, as explained above, soft drink consumption may continue because it has been given the lowest priority within practices, in this case eating lunch. In other words, the participant gave the soft drink less attention when she was eating and thus saved more of the material, which will help her to make soft drink consumption endure for longer. As time passes, Ava wanted to go home so she took her drink with her and consumed it there. This data clearly illustrates the stretching of soft drink consumption over spatial and temporal domains and the enmeshing of this material within consumers' daily routines. In this case, it might take this can of soft drink one hour or more to be consumed and consumption will be distributed over many kilometres (and practices), from the Students' Union, to home.

A similar case which supports the idea of the mobility of soft drink consumption is recorded in my observations in area one at lunchtime:

In area one at lunchtime, people gather so they can eat their lunches. The place is crowded, noisy and full of soft drinks, food and social interaction. Following a period of time, at approximately 1:45 pm, people usually leave this space in groups, leaving the finished food on their tables, but still consuming their soft drinks. Then, after that, some participants take their soft drinks with them when they leave the space. (Observation diary)

Here, my observation reflects that performing soft drink consumption is not exclusive to a restricted area or setting. It moves. Soft drink consumption starts in the Students' Union at lunchtime around the restaurants but ends up probably in distant locations. In this case, performers physically transport the materials (the soft drink cans and bottles) to another setting in which soft drink consumption can be continued.

5.4 Practices associated with soft drinks consumption

The aim of this theme is to understand the contexts in which soft drink consumption is embedded. This means highlighting the social practices within which soft drink consumption are embedded. The data I have generated through observation and informal interviews revealed that soft drinks may be consumed in isolation, however, their consumption is usually embedded within social practices including eating, studying, and social interaction. It is important to note that I have been able to arrive at these findings because I have been influenced by Shove et al.'s (2012) ideas about the connection between social practices, which is explained in section 2.3.

5.4.1 Soft drinks and foods

During my observation I noticed that the soft drink consumption “coexists” and is “co-located” with food consumption in a very obvious and visible way. Here my observation says:

At this point in time, around 1:30 pm, the phenomenon of soft drink consumption becomes clear. The soft drink consumption happens together with lunch. (Observation diary)

This observation reflects the entanglement of soft drinks with the food consumption in the Students' Union among participants at lunch time. This intertwining is evident, visible, and obvious even at the level of the materials involved. In other words, there is a mixture of soft

drinks cans and food leftovers on the same tables. The consumption of soft drinks in parallel with food is not confined to a limited period of the day, such as lunch time. Soft drink consumption and food bundle together, according to my observations and interviews, throughout the day. The following observation records this relation between soft drinks and food in the morning:

It is about 10:00 am. I can sometimes see participants sit and consume soft drinks with sandwiches at this time. (Observation diary)

Even during breakfast, soft drinks appear to be linked with food consumption practices. On the other hand, Participants' narratives during interviews also shed light on this connection. Here, for example, Ethan states:

"Sometimes I just used to drink them well with dinner." (Ethan)

Ethan's experience supports the claim stated above, as it indicates that soft drink consumption is a phenomenon that can come in combination with food consumption. Ethan's experience, although suggesting that soft drinks can be consumed with foods and meals, also suggests that this practice can be extended beyond breakfast and lunch to include dinner. The bundle of soft drink consumption practice and food consumption is reproduced in the Students' Union every day in the same way, pattern, and routine.

5.4.2 Soft drinks and the social practice of studying

I have also noticed that in the Students' Union, soft drinks are consumed in parallel with studying practices, whether participants are using laptops, notebooks, or any other form of study. Here my observation reflects that:

I saw many participants coming, bringing their sandwiches and soft drinks. They sat at a table, open their laptops and start working. (Observation diary)

In this context soft drink consumption appears to be co-located with the practice of studying. As with soft drinks and foods, the manifestations of the entanglement of soft drinks with studying practices were also evident, when it can be seen that soft drinks cans are placed somewhere between students' bags and laptops throughout the Students' Union.

5.4.3 Soft drinks and social interaction

Soft drink consumption practices have also been seen to be embedded in and coexisting with the moments in which participants interact with each other, chat, and laugh. My observation captured this in many ways. Here, for example:

Many participants were sitting around a table. This area offers tables distributed in restaurants and next to shops for students to use to eat meals, socialise and study. The participants were talking and laughing whilst consuming soft drinks. (Observation diary)

This claim has also been supported by many participants' narratives, when asked about the moments, conditions, and situations in which they usually consume soft drinks. One of the participants, Alisa, describes her experience that:

"In any sort of social event or gathering, I will probably have fizzy drinks as well." (Alisa)

In Alisa's experience, soft drinks can be found when there is lots of interaction or gatherings with friends.

5.4.4 Soft drinks practice in isolation

One interesting case that I came across during my observation was when I noticed that soft drinks are not linked with any other practices when it comes to doing almost nothing or using a mobile phone. I met a participant named Peter, who was consuming a soft drink and was distracted by his mobile. I interviewed him about whether he was consuming it with foods or doing anything else. He told me that he was not, that he was just drinking the drink by itself. When I asked him in general about the situations and conditions in which he consumes soft drinks, he replied by saying:

"Usually if I'd get a soft drink it would just be on its own." (Peter)

As we have seen above in this theme, soft drink consumption is co-located with food consumption, social interaction, and studying practices. These bundles of practices are reproduced in the Students' Union every day.

5.5 'Bundling' food and soft drinks together: meal deals

This theme reveals the extent to which the presence of soft drinks, as an actor in the food network, is or is not necessary for these networks to be established. Additionally, it highlights the role of social arrangements and environment in encouraging soft drink consumption with food among participants.

When soft drinks appear as an actor within a food network, they do so as part of an individual's routine, or normality. One participant reflects about the times he consumes soft drinks by saying that:

"I normally drink soft drinks uh, every time when I eat a meal." (Samuel)

According to Samuel, the consumption of soft drinks seems to be a habitual behaviour that frequently occurs when there is food. For Samuel, the existence of soft drinks as an actor in the food network seems something usual and expected - something performed on a regular basis and in a regular pattern. "Every time" Samuel eats food, soft drinks are part of this reality. The situation is almost the same with Nancy. When I asked her about the times at which she consumes soft drinks, she commented by saying that:

"I just use to drink them well with dinner, I just, normally." (Nancy)

According to this reflection, the course that soft drink consumption takes in Nancy's case does not differ much from Samuel's. For her, soft drinks are an actor embedded in the food network as a kind of habit, as with Samuel - not with breakfast or lunch, however, but only with the last meal, dinner.

If we think carefully about the extent to which soft drinks come with food, we will find that, in the last scenario with Nancy, they were missing at breakfast and lunch. In Samuel's experience, however, soft drinks were present at all meals - breakfast, lunch, and dinner, or, as he reflected:

"Every time when I eat a meal." (Samuel)

Nancy's and Samuel's experiences lead us to propose important questions, namely: to what extent is the presence of soft drinks with foods essential and pressing, and do the participants urgently need to consume soft drinks with their food, given that for Samuel, soft drinks are present whenever he eats, while with Nancy they are only drunk with dinner. By using the

language of actor network theory, the question would be whether a food network could be established in the absence of soft drinks, or not. If, as indicated above, soft drinks exist with food as a matter of normality and habit, this does not mean they are something necessary, pressing, and urgent. Participants' reflections show that food could be taken by the participants "normally", with no need for soft drinks. Empirical evidence suggested that the presence or absence of soft drinks as an actor in the food network is equal. One participant justified his consumption of a soft drink with food at the moment I met him by saying that:

"At this moment, it is because, in the shop they have a meal deal." (Benjamin)

It is only because soft drinks are available in the shop that he consumed one with his food. Benjamin consumes soft drinks with his food under the condition that the shops offer him a meal deal, it seems he will not do so if the shop does not offer a meal deal, and maybe this would not be a problem at all. According to him, the food network could be established with or without soft drinks and the participant may "normally and "habitually" have a meal without soft drinks if the shop does not offer a meal deal.

Soft drinks seem to be dispensable in the food network, they may be present or absent with the same value. In a more direct way Sebastian, too, commented on the value of soft drinks when they come with food by saying that:

"If it's there, then, you know, it's a complementary thing." (Sebastian)

As Sebastian suggested, soft drinks are something that can be added to food, or something that can "complement" the food. It is fine if soft drinks are available, and it seems that it is also fine if they are not. This leads us to change the way we have conceptualised soft drinks, as using the concept of "network" is not helpful. This is simply because, according to Mol and Law (1994), the notion of a network indicates that if one actor is missing from the network, the network can be dramatically affected as every actor in this network relies on every other (Mol and Law, 1994). However, our empirical evidence shows that a food network can be established without soft drinks, and participants can eat their food with or without soft drinks. Thus, it seems that the presence and absence of soft drinks with a meal has almost the same value. Therefore, conceptualizing soft drinks and food in the previous manner, that is, in terms of classic actor network theory, is not ideal.

As such, I need to employ another term or way to conceptualize this phenomenon. It could be better to understand soft drinks as one piece and food as another: if they are close enough to

each other, the two pieces will stick (bundle) together, and there will be attraction between food and soft drinks. According to these data, if the participant eats food and there is in the social environment a ‘meal deal’ offering soft drinks, there will be a tendency for the food to be consumed with a soft drink by the participant, as in Benjamin’s case. Therefore, the two materials are ‘bundled’ or bound together. However, if there is no meal deal offering soft drinks, food will often be consumed normally by the participants without soft drinks as they are,

“You know, it's a complementary thing”. (Sebastian)

If we go further and dig deeper into this phenomenon, the evidence does not only show that soft drinks are dispensable, but also that they are replaceable. As such, food as a material can be attached to other drinks as well.

Eliza reflects on this, saying that:

“I would rather have juice, to be honest, but they did not offer it in the meal deal, so I have to have that [a soft drink]. And they do not have many zero, like zero sugar or low sugar ones, so I just have to pick that [.....] It is just that I could not find any and some brands like Iron Brew don't actually have zero sugar ones anything or something. Or at least they are not sold there. So, it depends what is at the shop I'm buying it from.” (Eliza)

This reflection shows that different kinds of drinks could accompany food. Different kinds of drinks could be attracted to food, *but only if they are close and available*. Eliza’s reflection supports the claim that soft drinks can come with food as a matter of routine imposed by the environment and social arrangements, but that this routine is not necessary because “it depends what is at the shop”. Any alternative can work with Eliza: juice, zero-sugar drinks, or maybe water in other cases. However, she had to choose a soft drink because of the restricted choices that the meal deal offered, although, in her reflection, she preferred other kinds of drinks over sugar-containing soft drinks.

My argument is not to privilege one drink over another; rather, what matters is the environment, namely the shops which played an integral role in bundling soft drinks with food and, perhaps, normalizing this practice over time. Again, Eliza was flexible in her choices. Based on her reflection, she attempted to be healthier, at least from her point of view, but the social arrangements and environment did not allow her to do so.

The phenomenon of a meal deal, or what one participant calls the “meal deal culture”, has frequently been blamed by participants as a main reason for their soft drink consumption. Martha attributed her soft drink consumption to the meal deal phenomenon. She justifies her soft drink consumption by saying that:

“Yes, something, because it come with the meal deals. So, I bought a sandwich or something and comes with a soft drink. Yes. Yeah, well. Yeah, there [she was pointing at an advertising board about a meal deal offer], three meal deal. Yeah, so it comes with a sandwich, the chips and the soft drink. So, that's why.” (Martha)

For Martha, therefore, as long as there is a meal deal “that is why” there is soft drink consumption. Leo’s soft drinks consumption is also premised on the meal deal.

“Um, if I buy a meal deal or yeah.” (Leo)

Again, Leo would take soft drinks with food if there is a meal deal. It seems that it is very tempting for participants to consume soft drinks with food when there is a meal deal. This could be for many reasons, some of which are mentioned by Bella when she narrates that:

“Um, I don't know, it's normally cheaper to get like something over in at the shop than here. With like meal deal, it's like, suppose it entices you more since it's in the meal deal, it and it would make it cheaper, with like the bigger bottle.” (Bella)

Bella’s reflection shows that usually the meal deals are attractive as soft drinks will be served with food when the customer pays a little more money for a large bottle of soft drink. This encourages participants to consume soft drinks with food.

To conclude, this theme has shown that soft drink consumption is dispensable in the food network, and participants could normally consume their food without soft drinks. It shows that participants were flexible in their choices when they wanted to drink something with food, but social arrangements, in particular the meal deal phenomenon, do not always support them. The “meal deal culture” is very tempting and difficult to reject, as for a small amount of money you can add a large bottle of soft drink.

5.6 Soft drinks as a material component of meal deals

As you can see, I discovered after quite a period of observation that soft drink consumption was tied together in the practice of meal deal consumption. This was also evident throughout

my informal interviews. During the informal interview with Martha, I asked her why she was consuming the soft drink she had with her at the time of the interview. She responded:

“Because it came with the meal deals. So, I bought a sandwich or something and comes with a soft drink.” (Martha)

According to this response, Martha attributed her consumption of the soft drink to the fact that it came as part of the package of a meal deal. Thus, there is a link between the soft drink consumption and meal deal consumption. Benjamin agreed with what Martha said about soft drinks when I asked him why he was consuming a soft drink. He said:

“At this moment. It is because, in the shop they have a meal deal” (Benjamin)

He, like Martha, consumes soft drinks because it comes as part of the meal deal sold in the shop. Therefore, his response also emphasises the link between soft drinks and meal deal consumption.

5.7 Summary

This chapter presents the findings related to soft drink consumption, highlighting that the meanings associated with soft drink consumption differ from context to context and that soft drink consumption is associated with other social practices. This chapter concludes by suggesting that there is a link between soft drink consumption and the phenomenon of meal deals. The next chapter will provide all the findings related to meal deals and how meal deals can drive people to consume more soft drinks.

Chapter 6: Results (Part 2): Meal deals

6.1 Introduction

This chapter presents the findings related to meal deals. Specifically, it discusses two main points: how meal deals are arranged on shop shelves and the function and meanings of meal deals. In terms of the arrangement of meal deals, this chapter explores the meal deal components available at the two shops that I visited and how the construction of meal deals can encourage soft drink consumption. This chapter then goes on to present the function and meanings of meal deals, showing that meal deals are inexpensive, widely available and can encourage individuals to consume soft drinks.

6.2 The arrangement of meal deals at the Students' Union Shop and Greggs

A meal deal is a combination of three distinct items, namely, a main, drink and snack. According to the participant interviews, it is common for soft drinks to be sold as part of a meal deal. Therefore, as a researcher, I decided to observe soft drinks as a material in the context of meal deals. Thus, the following findings concern the meal deals sold at different sites and highlight the positioning of soft drinks in these sites. I will outline the meal deals available and define each of the meal deals individually, including describing their components. I will use a table to present the meal deal components.

6.2.1 The performance of meal deals in the Students' Union Shop

The Students' Union Shop offers three meal deal options. One is sold at £3.50, and another is sold at £3.00, and the third one is sold at £4.00. The difference between them will be illustrated in the paragraphs below. In the following paragraphs, I will outline how the £3.50, £3.00 and £4.00 meal deals are constructed and arranged on the shop shelves, after which I will conduct an analysis and pose and answer questions to explain the reasoning.

6.2.1.1 The £3.50 meal deal

The £3.50 meal deal has a designated area on the shop shelves in which all the items related to this meal deal option, such as sandwiches, snacks and drinks, can be found beside each other. The customer can identify this area as it has start and end points, as shown in the picture below.



Figure 3. The £3.50 meal deal

The £3.50 meal deal offers one good quality (according to the manager) sandwich, wrap, or salad and the customer can choose two more items from a selection of drinks, and snacks. It is important to note that although the total cost of the meal deal is £3.50, the mains, drinks and snacks have different prices if they are bought separately from the meal deal. This is the same in other meal deals. This point will be illustrated in all meal deal tables, which will show each meal deal item's individual price (how much it costs when it is sold outside the meal deal).

6.2.1.2 Components of the £3.50 meal deal

The components of the £3.50 meal deal are as follow:

A- Sandwich, wrap, and salad

The first component of the £3.50 meal deal is the sandwich, wrap and salad options. Table 4 shows sandwich, wrap and salad options related the £3.50 meal deal.

Table 4. Sandwich, wrap and salad options related to the £3.50 meal deal and their prices if they are bought outside the meal deal.

Sandwich, wrap, or salad options	Item description and ingredients	Price (outside the meal deal)
Band B sandwich, wrap, and salad.	Simply ham baguette. Tuna mayonnaise baguette. Cheese on a white baguette.	£2.59
Band C sandwich, wrap, and salad	Tuna cucumber with mayo on malted bread. Tikka with salad on malted bread. Ham with lettuce, tomato and cucumber on white bread.	£2.79
Band D sandwich, wrap, and salad	Sausage with egg, mayo and tomato on white bread. Mozzarella with tomato and rocket (vegetarian) on white bread.	£2.99
Band E sandwich, wrap, and salad	Pieces of duck with sauce and salad. Falafel with sweet potato and hummus on a toasted sandwich.	£2.99
Band F sandwich, wrap, and salad	Chicken mayonnaise with bacon and salad. Smoked cheddar cheese with salad on malted bread. chickpeas with carrot on a toasted sandwich.	£3.29
Band G sandwich, wrap, and salad	Quorn chicken and stuffing on toast Goat cheese with onion on a toasted sandwich Quorn (ham salad)	£3.49
Band H sandwich, wrap, and salad	Sweet potato falafel with hummus wrap (vegan). Jackfruit wrap. Dairy-free mozzarella with vegan pesto mayo wrap.	£3.79
Band R sandwich, wrap, and salad	Bacon cheese and tomato panini Ham and cheese (panini).	£2.79
Band S sandwich, wrap, and salad	Roast chicken and cheese Peperoni (pizza).	£2.79
Band T sandwich, wrap, and salad	Chicken bacon with cheese and tomato on a ciabatta panini Dairy-free cheese with tomato on a toast ciabatta.	£3.29

B- Drinks

A drink is the second component of the £3.50 meal deal. Table 5 shows the drinks options available and the individual prices of the drinks when they are bought outside the meal deal.

Table 5. Drink options for the £3.50 meal deal, their sugar content in grams, and their prices if they are bought outside the meal deal.

Drink option	Sugar content in grams	Original price (outside the meal deal)
Sprite can	11 g	£0.75
Dr Pepper can	16 g	£0.75
Orange Fanta can	15 g	£0.75
Lemon Fanta can	15 g	£0.75
Fruit Twist Fanta can	15 g	£0.75
IRN-BRU	16 g	£0.75
Coke can	35g	£0.75
Diet Coke can	0 g	£0.75
Exotic Mango Diet Coke can	0 g	£0.75
Sparkling water	0g	£0.60
Low sugar lemon flavored natural water	,4g	£0.80
Low sugar strawberry flavored natural water	,4g	£0.80
Low sugar flavored natural water	,4g	£0.80

C- Snacks

The third component of the £3.50 meal deal is the snacks. Table 6 shows the snack options and their individual prices when they are bought outside the meal deal.

Table 6. Snack options of the £3.50 meal deal, and their prices if they are bought outside the meal deal.

Snack option	Original price (outside the meal deal)
Unsalted crisps	£0.89
Chorizo crisps	£0.89
Tomato crisps	£0.89
Jalapeno and dill crisps	£0.89
Cider vinegar and sea salt crisps	£0.89
Sea salt crisps	£0.89
Cheddar and onion crisps	£0.89
Sweet chili crisps	£0.89
Black pepper and sea salt crisps	£0.89
Cool original crisps	£0.69
Cheese and onion crisps	£0.69
Pickled onion crisps	£0.69
Worcester sauce crisps	£0.69
Smoky bacon crisps	£0.69
Peanut butter and almond popcorn	£0.89
Sweet coconut and vanilla popcorn	£0.89
Sweet and salty popcorn	£0.89
Choc chip cookie	£0.70
Oat cookie	£0.70
fruit cookie	£0.70
Golden oat flapjack	£0.89
Chocolate flapjack	£0.89
Dairy Milk	£0.79
Natural yogurt	£0.69
Rhubarb yogurt	£0.69
Banana yogurt	£0.69
Apple fruit	£0.30
Pear fruit	£0.40

6.2.1.3 The £3.00 meal deal

The £3.00 meal deal also has a designated area on the shop shelves in which all the items related to this meal deal, such as sandwiches, snacks and drinks, can be found beside each other. The customer can identify this area as it has start and end points on the shelves. The £3.00 meal deal offers one sandwich, sub, wrap, or salad, one more drink, and one more snack.

6.2.1.4 Components of the £3.00 meal deal

The components of the £3.00 meal deal are as follow:

A- Sandwiches, wraps and salads

The first component of the £3 meal deal is the sandwich, wrap and salad options. Table 7 shows the original prices of the sandwiches, subs, wraps, and salad that are available in the £3.00 meal deal.

Table 7. Sandwich, wrap and salad options related to the £3.00 meal deal and their prices if they are bought outside the meal deal.

Sandwich, sub, wrap, or salad option	Item description and ingredients	Original price (outside the meal deal)
Band B sandwiches, subs, wraps, and salad	Egg with mayonnaise and salad sandwich	£1.99
Band C sandwiches, subs, wraps, and salad	Tuna, cucumber and mayonnaise on whole meal bread. cheese with mayonnaise on malted bread.	£2.39
Band D sandwiches, subs, wraps, and salad	cheese, onion coleslaw and mayonnaise on malted bread. Cheddar cheese with mixed-leaf salad, tomato and cucumber on whole meal bread. Tuna mayonnaise with cucumber on a malted sub roll.	£2.59
Band E sandwiches, subs, wraps, and salad	Chicken with mayonnaise on a white sub roll Chicken and bacon with mayonnaise on a white sub roll Ham with cheese and mayo on a malted sub roll.	£2.69
Band F sandwiches, subs, wraps, and salad	Prawn and mayonnaise sandwich. Cheese and salad in a tortilla wrap. Onion with mango dressing and lettuce in a tortilla wrap.	£2.79
Band G sandwiches, subs, wraps, and salad	Falafel and hummus with onion and on a flatbread. Tomato and chicken with salad on a flatbread. Cheese and cheddar ham with mango chutney on a flatbread	£2.89
Band H sandwiches, subs, wraps, and salad	Pasta with tuna, corn and mayonnaise	£2.99
Band I sandwiches, subs, wraps, and salad.	Red Leicester with mayonnaise and cucumber on malted bread. Smoked salmon with mayonnaise and cheese on malted bread.	£2.79

B- Drinks

A drink is the second component of the £3 meal deal. Table 8 shows drinks options and the original prices of the drinks that are available in the £3.00 meal deal.

Table 8. Drink options of the £3.00 meal deal, their sugar content in grams, and their prices if they are bought outside the meal deal.

Drink option	Sugar content in grams	Original price (outside the meal deal)
Sprite can	11 g	£0.75
Dr Pepper can	16 g	£0.75
Orange Fanta can	15 g	£0.75
Coke can	35 g	£0.75
Diet Coke can	0 g	£0.75
Zero-sugar Coke can	0 g	£0.75
Sparkling water	0g	£0.60
Sugar-free apple and blackcurrant-flavored natural water	0 g	£0.80
Sugar-free-flavored natural water	0 g	£0.80
Sugar-free orange and mandarin-flavored natural water	0 g	£0.80

C- Snacks

The third component of the £3 meal deal is the snacks. Table 9 shows the snack options and their individual prices when they are bought outside the meal deal.

Table 9. Snack options of the £3.00 meal deal, and their prices if they are bought outside the meal deal.

Snack type	Original price (outside the meal deal)
Sea salt popcorn	£0.89
Sweet 'n salt popcorn	£0.89
Cinema sweet popcorn	£0.89
Natural yogurt	£0.69
Mandarin yogurt	£0.69
Vanilla yogurt	£0.69
Strawberry yogurt	£0.69
Rhubarb yogurt	£0.69
Raspberry yogurt	£0.69
Peach melba yogurt	£0.69
Banana yogurt	£0.69
Sea salt and vinegar crisps	£0.59
Cheese and onion crisps	£0.59
Canadian ham crisps	£0.59
Prawn cocktail crisps	£0.59
Beefy crisps	£0.59
Cream cheese and chives	£0.59
Sea salted crisps	£0.59

6.2.1.5 The £4.00 meal deal

This is the same as the £3.50 meal deal, but the sandwiches are either halal or gluten free, and are therefore sold at £4.00.

6.2.2 Meal deals as a social practice at the Students' Union

As we can see deals are not 'accidentally' organised and presented to students. Rather they are packaged in such a way as to drive consumption. They constitute a social practice that shops and food manufacturers produce for consumers. During my time in the Students' Union Shop I discovered that the managers use a planogram (Figure 4) to arrange the food and drinks on the shelves. These are provided to them by the food companies who supply the basic products. In this way the food and drinks are arranged into meals deals and the shelves are therefore presenting the meal deals as a 'performance' for students and staff to consume. As a social practice meal deals therefore combine the materials of the meal in very particular ways and this has an impact on what can be consumed. The materials are therefore arranged according to very particular rules and guidelines.

Detailed descriptions of the materials that make up meal deals will be presented in the following sections where I will show how the materials in meal deals facilitate the consumption of meal deals and soft drinks within this context. In terms of the meanings of meal deals, in the following paragraphs, we will see how meal deals are associated with the concept of value for money. Meal deals are therefore designed to make consumers feel that they are getting something valuable for the money they have paid.



Figure 4. Planogram

In terms of the drink options, sugar-containing, low-sugar and sugar-free drinks are all available in all types of meal deal, but customers are restricted by a limited choice in the case of sugar-free drinks. For example, in the £3.50 meal deal, customers can only choose between two sugar-free soft drinks, while they can choose between six full-sugar soft drinks. Thus, if the customer wants to take the meal deal, they will be easily directed to full-sugar soft drinks. Meanwhile, in the £3.00 meal deal there are only two choices of sugar-free drink, while there are four choices of full-sugar soft drinks. Thus, if the customer wants to take the meal deal, as in the previous meal deal, they will be easily directed to full-sugar soft drinks.

Additionally, if the customer wants to buy water and does not have a bottle to fill with free tap water, there are two possible scenarios. In terms of the £3.50 meal deal, they will have only one choice of sugar-free water – the sparkling water – because the other choices are all low-sugar flavoured still bottled waters. Meanwhile, in terms of the £3.00 meal deal, the water choices are better because if the customer wants to buy water and does not have a bottle to fill with free tap water, they can have sugar-free flavored natural or sparkling water. However, there is still no unflavoured still bottled water available for all these meal deal types and in the Students' Union Shop as a whole. However, free tap water is available if the customer brings a bottle with them.

One more important point is that the options which are available for sale in all these meal deals, such as sparkling bottled water, sugar-free flavored still bottled water and low-sugar flavored still bottled water, are usually placed towards the sides of the shelves while the soft drinks dominate the middle area. In other words, in terms of the positioning of the items for sale on shelves, the healthy food, such as bottled water and fruit, is placed within a limited area on the shelves, while soft drinks, chocolate, crisps and cookies, for example, dominate most of the central area on the shelves. This makes them more convenient to choose.

Another interesting point that I have observed is that the original prices of drinks are £0.75 and £0.80 if they are bought separately from the meal deal. However, this price can be dramatically reduced, to £0.005 in some cases, if the drink is included in the meal deal. For example, if the customer buys a Band T sandwich, which costs £3.49 when bought separately (the total meal deal cost is £3.50), and chooses two drinks for the other two items, then each drink will cost £0.005. However, this dramatic price reduction is not limited to soft drinks but involves other snacks. For example, if the customer buys a Band T sandwich, which costs £3.49 when bought separately (the total meal deal cost is £3.50), then any two snacks, for example one packet of

crisps and one packet of popcorn will cost the customer just only £0.01. This is an interesting phenomenon, if the customer buys a sandwich, it seems that snacks and drinks are pushed and automatically combined with the sandwich. Cameron-Smith et al. (2002) describe this phenomenon as “upsizing”, suggesting that this technique is used in marketing when the goal is to increase the cost of the products for sale but at the same time provide the customer with a reward and motivation for buying certain combinations. Cameron-Smith et al. (2002) also contended that these rewards, or the additional very low-priced items that are provided within a meal deal such as drinks and crisps, are full of sugars and fat and are dangerous to health. I will now present two typologies arranged around high and low sugar to illustrate what these rules mean for sugar consumption.

6.2.2.1 Typology one: high sugar consumption

The student usually takes one of the sandwiches and, as explained above, if they choose the first meal deal, which is sold at £3.50, the student can take two more items from the selection of drinks and snacks. In this case, let us assume that the student chooses one drink and one snack. The soft drinks and snacks are offered for sale in a very high quantity and are very visible as they cover a wide area on the shelves compared to other healthy items, such as bottled water and fruit, as shown in the picture below.



Figure 5. Water and fruit are positioned to the sides of the shelves.

Therefore, the existence of snacks and soft drinks on the shelves, in relation to the meal deal zone, tend to dominate the meal deal shelf space and thus have the best visibility and easy access. This exactly mirrors what it has been written in the literature regarding shelf spaces in shops and supermarkets. The consumer's choices are significantly affected by the surrounding environment inside the store, in particular, their choices are influenced by the different factors related to shelf space (Adam et al., 2017). For example, Wilkinson et al.'s (1982) revealed that when the items for sale are distributed over a wider space or in more than one location, the sales of these items will increase. Meanwhile, Chandon et al. (2009) suggested that positioning products at the centre of the shelves can attract more individuals' attention to this product. This is precisely the case in the Students' Union Shop. Soft drinks and snacks are not only at the centre of the shelves but also dominate the whole area, while water and fruit are positioned to the sides of the shelves. This promotes the consumption of soft drinks and snacks, and thus sugar consumption in general, since their choices may be shaped by the design of the shop. This kind of positioning means that access to soft drinks and snacks is easy and so consumption may well be higher. Chandon and Wansink (2012) suggested that marketing has several strategies and aims that influence food consumption. One strategy is to enhance accessibility to food items, a form of which is when marketing prepares and sets these food related items in a way that is handy to buy (Chandon and Wansink, 2012). Another form of accessibility is when steps are taken to make products "easy" for consumption (Chandon and Wansink, 2012). In this case it seems to be more convenient for students to choose soft drinks and snacks over other the healthier choices such as water and fruit.

In the previous paragraphs, we showed how students' choices may be influenced by the convenience and availability of the food available on the meal deal zone shelves in the Students' Union Shop. However, there is another important factor that may affect students' choices, namely the pricing of the food, which undoubtedly plays an important role in what food students choose as well as their food consumption practices in general. As mentioned earlier, a student might choose to buy one of the above-mentioned meal deals – let us assume the meal deal which is sold at £ 3.50. Now, if the sandwich's original price is £ 3.49, then the meal deal offers this student the ability to add two more items from a selection of drinks and snacks, so the total cost would only be £ 3.50. This may give the students the feeling of obtaining more 'value' for what they have paid, as they might feel that the items they have purchased are more than worth the money they have spent. Therefore, this idea may influence their choice to engage with this kind of meal deals. This exactly mirrors what has been mentioned by French (2003)

regarding that a variety of factors can affect an individual's choices concerning their food, some of which are individual and some of which are related to the surrounding environment. According to French (2003), perceived value is one of the most important factors influencing individuals' food choices, whereby value can be related to the price or the size of the portion. Again, this is exactly the case in the Students' Union Shop, as the student will perceive a great value when adding two items (large portion) while only paying a smaller amount of money for this addition.

6.2.2.2 Typology two: low sugar consumption

Let us assume that a student wants to take the same meal described above, but with their one sandwich they want a bottle of still water and one piece of fruit. The first problem this student encounters is that regular still water is not available for sale as part of this meal deal nor indeed in the Students' Union Shop at all. It is available as free tap water if the consumer brings a bottle. However, there are two important points to consider here. The first one is whether or not it is normal practice for students at the Students' Union to carry a bottle. The second point is that there are a lot of people who do not want to consume tap water and thus prefer bottled water. The finding here is that still bottled water is not available for sale, or it is difficult to access. On the other hand, there are other bottled water choices for sale, in the £3.50 meal deal, there is sparkling water and low sugar flavoured water, therefore, the consumer may switch to one of these items, but they are placed towards the sides of the shelves and not at the centre. It is the same case with fruit, only pears and apples are available for sale compared with the many crisps, chocolates and drinks on the shop shelves. Furthermore, the problem is not only that healthy food like water and fruits have limited choices but also that in terms of shelf space, they cover a much smaller area and are positioned at the side and not at the centre of the shelf area set aside for the meal deal. This affects the accessibility and the convenience as the student may find it difficult to identify the area for fruit and water. Adam et al. (2017) discussed the importance of the location of products on shop shelves as this has a direct relationship with the accessibility to the consumer. Specifically, and according to Sigurdsson et al. (2009), sales are higher for items that are placed on the middle of the shelves as they receive more attention. Therefore, we could extract that positioning water and fruit towards the side of the shelves and in a limited area will not bring students' attention to them and, therefore, are difficult to access and not a convenient choice. From the perspective of social practice theory, meal deal consumers might find it difficult to access healthy materials (such as water or fruit) in the meal

deal. Again, this is because the arrangement of the meal deal materials on shelves favours soft drinks and snacks over water and fruit.

6.2.3 ‘Meals on the go’

In addition, I have noticed throughout my observation is that one of the websites repeatedly mention a sentence which is “food on the go”. This a little bit weird and not common concept as we have used to know that we eat our meals and foods when we are set on tables and in a specific time. In other words, we are familiar with the concept that meals might take the formal pattern, for example, when we set with our family members on tables in weekends and eat the lunch meal together whether in house or in restaurants. But this phrase “food on the go” does not reflect this idea at all, as food on the go can lend the food consumption, in general including soft drinks, some casualty, randomness and flexibility rather than being formal.

Now as I mentioned previously one of the websites frequently mention in its home page the sentence “food on the go” and their long-lasting effort and intention to make the foods and drinks, and the meal in general convenient to be consumed “on the go”. If the food and drinks come to be consumed “on the go” this have implication and consequences for food, soft drinks, and meal consumption in general and so can affect other practices as well. Additionally, their effort of making the food and drinks to be consumed on the go can be achieved in two ways

The first way is throughout changing the element of the meaning. When any organization or site, including this website, call and advertise for the idea of the “food on the go”, in this way they somehow enable a new social practice that can be ‘carried’ across the population in which these meanings could alter, over time, the way the population practices meal consumption. In this way the previous meanings which attached with meal consumption may be detached. In other words, we as society we start to no longer think that we need to eat at a specific time at a table with family and without doing any other practices. But we start to think that the meal can be consumed on the go, in a casual manner at any time with other social practices such as doing our daily tasks. Secondly by the materials, when any food organization or company, change the materials of their production this may also affect the practice of meal consumption including food and drinks. In other words, when they restrict their food products to sandwiches mainly, and not food on plates, in this way they facilitate and enhance the idea, and make the meal more convenient to be consumed on the go.

During my observation in the Students' Union Shop, I have noticed how the concept food on the go is applicable and available to practice in day to day life and the consequences that comes with idea of meal on the go. The efforts that have been made over time by these organizations in changing the meanings associated with meal consumption (including sandwiches and soft drinks) and make it to be ready consumed on the go, whether by changing the meanings or materials, seem to have been successful.

Throughout my observation I have noticed how "food on the go" is practiced by students in the Students' Union and what are the consequences of this idea food on the go. A huge number of students buy their meals (including sandwiches, soft drinks and snacks) from the Students' Union Shop that I have collected data from, then they take their meals to go and then open their laptops and studying through their notebooks while at the same time putting their meals that they have bought and eat them with the practice of the studying. The practice of food and soft drink consumption is merged with practice of studying and this is could be attributed to the fact that students have internalized the new meaning which is that meal consumption is no longer fixed and formal, but tend to be something be casual and on the go and something can happen with any other practices such as studying. Another example embodies this concept of "food on the go", is that during my observation I have seen how students when they want to move from place to another place they carry with them their soft drinks on their hands and walk and interact with each other. This typically what does "food on the go" mean. Here Figure 6 below shows how the meaning "food on the go" has been capable of connecting between studying and meal (food and soft drinks) consumption practices. The following section addresses the findings relevant to Greggs. I selected Greggs as a setting for data collection because the chain offers meal deals that are worthy of analysis. By examining meals deals at more than one site, we can better understand this phenomenon and how much it may influence soft drink consumption.

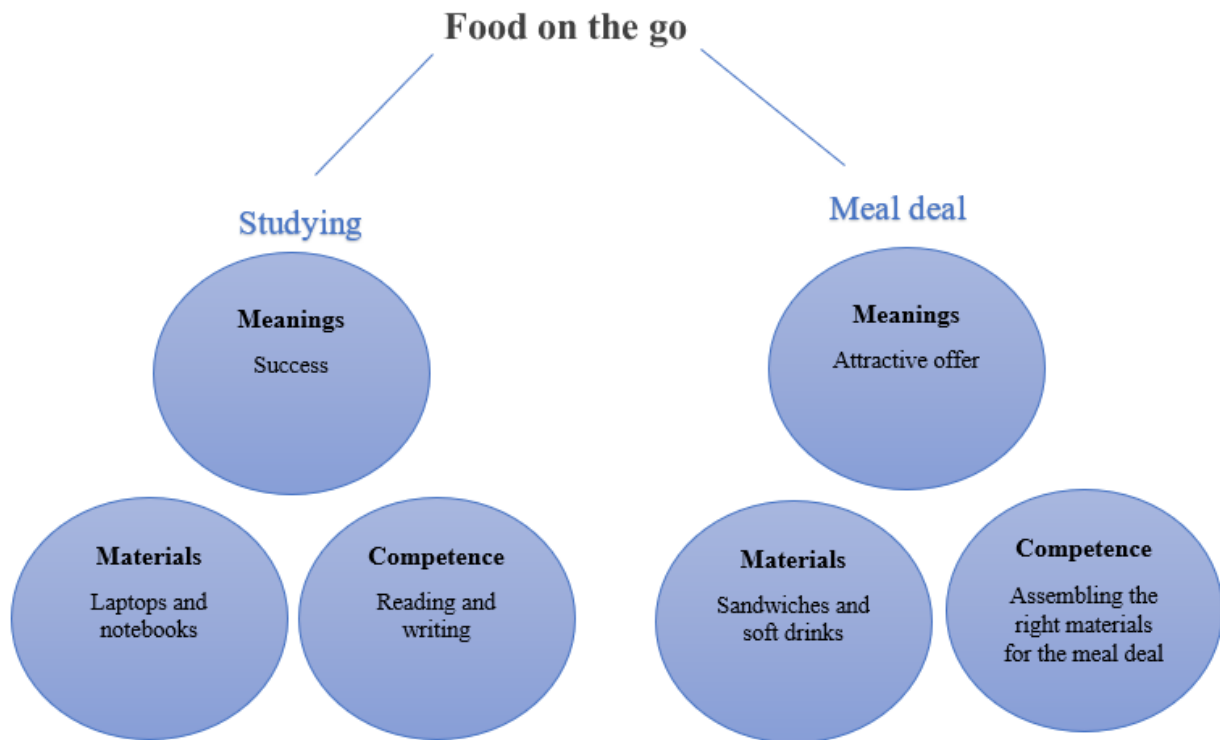


Figure 6. The meaning “food on the go” is connecting between studying and meal deal consumption.

6.2.4 The performance of meal deals in Greggs, UK

By “zooming out” further we can see that meal deals as a social practice are performed and arranged in a plethora of social settings. In this section I focus on the performance of the meal deal in Greggs. Greggs has lots of branches in the UK and offers a wide range of food including meal deals. Different types of mains are available, such as various sandwiches including tuna, chicken, ham and cheese. Different drinks including juices, water and soft drinks are also available. This collection of products allows people to buy a meal to be consumed on the go whether it is for breakfast, lunch or dinner. This explains why the chain behind Greggs has become popular in the UK. These stores are always found in crowded settings full of people of different age groups. People who buy items from Greggs can choose to eat in or take away.

I will outline the three meal deals available in Greggs. I will define each of the meal deals available individually, including describing their components. I will use a table to present the meal deal components as well as making further notes about these meals deals as a different kind of social practice.

6.2.4.1 Type 1 sandwich and any drink meal deal.

This meal deal offers a type 1 sandwich and one cold or hot regular drink, and it costs £3.25. However, there are minor additional costs in some cases. There are 3 drinks in this shop for which the customer needs to pay an extra tax. Extra taxes for these drinks are £0.07 for the first drink with a sugar content of 27 g, £0.10 for the second drink with a sugar content of 35 g, and £0.14 for the soft drink with a sugar content of 54 g.

6.2.4.2 Components of the type 1 sandwich and any drink meal deal.

The customer can choose only one of the type 1 sandwiches and one cold or hot drink. Further details of the components are as follow:

A- Type 1 sandwich options

The first component of this meal deal is the type 1 sandwich options. Table 10 shows the type 1 sandwich options.

Table 10. Type 1 sandwich options, their prices outside the meal deal.

Type 1 sandwich options	Price outside the meal deal
Chicken and bacon	£1.90
Egg mayonnaise	£1.90
Tuna, mayonnaise and cucumber	£1.90
Mexican chicken on type 1 bread	£2.75
Type 1 pasta	£2.75
Type 2 pasta	£2.75
Type 3 pasta	£2.75
Cheese on type 2 bread	£2.75
Mexican chicken on type 2 bread	£2.75
Chargrilled chicken on type 2 bread	£2.75
Honey roast ham and egg salad on type 3 bread	£2.55
Chicken salad on type 3 bread	£2.55
Tuna mayonnaise on type 3 bread	£2.55
Cheese salad on type 4 bread	£2.55
Roast chicken mayonnaise on type 4 bread	£2.55
Tuna crunch on type 4 bread	£2.75
Ham and cheese on type 4 bread	£2.75
Chicken and club on type 4 bread	£2.75
Tandoori chicken on type 4 bread	£2.55

B- Cold and hot drink options

A drink is the second component of this meal deal. Table 11 presents the cold drink options.

While Table 12 shows the hot drink options.

Table 11. Cold drink options, their sugar content in grams, and their prices if they are bought outside the meal deal.

Drink options of Cold drinks (portion size)	Sugar content in gram	Original price outside the meal
Still strawberry water	0 g	£1.10
Still lemon water	0 g	£1.10
Still natural mineral water (750 ml)	0 g	£1.10
Still natural mineral water small (500 ml)	0 g	85p
Ribena mini blackcurrant (250 ml)	1.1g	£1
Ribena mini apple and mango (250 ml)	1.3g	£1
Capri-Sun (330)	16g	£1.10
Orange juice (250ml)	26.6g	£1.20
Orange juice (500ml)	53.3g	£1.150
Apple juice (500 ml)	56.6	£1.50
Oasis citrus punch (500 ml)	20 g	£1.40
Oasis summer fruit (500 ml)	20g	£1.40
Ribena (500 ml)	23.2	£1.40
Sparkling raspberry lemonade	.6 g	£1.20
Sparkling cherryade	2.3 g	£1.20
Sparling mango and pineapple	1.9g	£1.20
Cloudy lemonade	.6 g	£1.20
Red Bull (250ml)	27.5 g	£1.47
Lucozade original (500 ml)	22.6	£1.45
Lucozade energy orange (500 ml)	22.6g	£1.45
Lucozade sport (500 ml)	17.6g	£1.45
Lucozade support fruit punch (500 ml)	18.5 g	£1.45
Fanta orange (500 ml)	24g	£1.40
Dr Pepper (500ml)	24g	£1.40
Coca-Cola (330 ml)	35g	95p
Coca Cola (500 ml)	54g	
Coca cola zero (500ml)	0 g	£1.40
Diet coke (500 ml)	0g	£1.40
Diet coke (330ml)	0g	85p

Table 12. Hot drink options, their sugar content in grams, and their prices if they are bought outside the meal deal.

Regular hot drink options	Sugar content in grams	Original price outside the meal deal
Flat white	6 g	£1.90
Espresso	0g	£1.40
Cappuccino	8.6 g	£1.90
Latte	11 g	£1.90
Mocha	30 g	£1.90
Americano	0 g	£1.60
White coffee	2.9 g	£1.60
Hot chocolate	30 g	£1.90

6.2.4.3 Type 2 sandwich, potato pieces and any drink meal deal

This meal deal offers a type 2 sandwich, one portion of potato pieces, and a cold or hot regular drink. It costs around £4.00. There are 3 drinks in this shop for which the customer needs to pay an extra tax. Extra taxes for these drinks are £0.07 for the first drink with a sugar content of 27 g, £0.10 for the second drink with a sugar content of 35 g, and £0.14 for the soft drink with a sugar content of 54 g.

6.2.4.4 The components of the type 2 sandwich, potato pieces, and any drink meal deal.

The customer can choose one of the type 2 sandwiches, one portion of potato pieces and any cold or hot drink. Further details of the components are as follow:

A- Type 2 sandwich options

The first component of this meal deal is the type 2 sandwich options. Table 13 shows these options.

Table 13. Type 2 sandwich options, their prices outside the meal deal.

Type 2 sandwich options	Price outside the meal deal
Ham and chicken on type 4 bread	£3.10
Steak on type 4 bread	£3.10
Southern-fried chicken	£3.10
Ham and ches on toast	£2.85
Chicken and bacon on toast	£3.00

B- Potato options

The second component of this meal deal is the one portion potato pieces. Table 14 shows the potato options.

Table 14. Potato options and their original prices outside the meal deal.

Potato options	Original price outside the meal deal
Potato pieces	£1.05

C- Cold or hot drink options

A drink is the second component of this meal deal. Tables 11 and 12 show the cold and hot drink options, respectively.

6.2.4.5 Chicken pieces, potato wedges and drink meal deal

This meal deal offers chicken goujons, one set of wedges and any cold or hot regular drink. It costs around £4.00. There are 3 drinks in this shop for which the customer needs to pay an extra tax. Extra taxes for these drinks are £0.07 for the first drink with a sugar content of 27 g, £0.10 for the second drink with a sugar content of 35 g, and £0.14 for the soft drink with a sugar content of 54 g.

6.2.4.6 Components of the third meal deal, which is the chicken pieces, potato and a drink meal deal

This meal deal offers chicken pieces, one portion of potato pieces and any cold or hot drink. Further details of the components are as follow:

A- Chicken pieces

The first component of this meal deal is the chicken pieces. Table 15 shows the chicken pieces options.

Table 15. Chicken pieces options and their original prices outside the meal deal.

Chicken pieces options	Original price outside the meal deal
Chicken pieces	£2.85

B- Potato pieces

The second component of this meal deal is the one portion potato pieces. Table 14 above shows the potato options.

C- Hot or cold drink

A drink is the second component of this meal deal. Tables 11 and 12 above show the cold and hot drink options, respectively.

6.2.5 Meal deal as social practice at Greggs

One of the most interesting points about this shop is how the nutritional labelling on the soft drink bottles gives a particular ‘performance’ to the consumer. With some soft drink brands, when the sugar level is high, the serving size tends to present half the portion size assuming that the consumer can calculate the total sugar content. This phenomenon has been mentioned in the literature, it has been suggested that serving size informs consumers about the amount of ingredients the product contains and as a consequence underestimates the actual consumption of the product (Bryant and Dundes, 2005). Thus, the information available on serving sizes can be easily misunderstood, meaning the consumer is consuming more than they are aware of, they will find it more difficult to achieve better health (Bryant. and Dundes, 2005). However, the manufacturers of these products gain many benefits when they do not match the serving size with the portion size of the product as the total sugar and fat contents may seem to be less than that what is actually being consumed (Bryant and Dundes, 2005). Furthermore, this may also cause the customer to think that the portion size is large as it contains many serving sizes (Bryant and Dundes, 2005). Figure 7 illustrates this point.

In the previous analyses, I discussed two scenarios (high sugar consumption and low sugar consumption) and presented how it is much easier for the consumer of meal deals to opt for the high-sugar option when they buy meal deals and that in Greggs, portion sizes can influence customers and encourage them to consume more soft drinks. This demonstrates that there are different factors related to the meal deals that can in turn drive soft drink consumption.



Figure 7. How serving sizes do not match the portion sizes.

The image in Figure 7 presents an example of two soft drink bottles from the same brand, whereby both bottles contain 500 ml but their sugar contents vary. The total sugars available in the left-hand bottle is 30 g, but the sugar shown on the bottle label is only 15 g. The manufacturer assumes that the consumer can calculate the total sugar content because the serving size (250 ml) is also given on this packaging for the whole 500 ml bottle. However, if the consumer does not do the calculation, they may think that this bottle only contains 15 g of sugar. This aligns with the example mentioned by Bryant and Dundes (2005), who showed that

for a 20-ounce soft drink bottle, manufacturers tend to state that it contains 2.5 servings. Thus, they may send an indirect message that the portion size is large as it contains many servings, while the sugar and perhaps other ingredients appear to be much less than is actually contained in the bottle (Bryant and Dundes, 2005). In the right-hand image in Figure 7, the soft drink has a relatively low sugar content, but the brand states that the serving size is 500 ml, the whole bottle, so there is no need for the consumer to calculate. This may be because the sugar content for this large bottle is low, so the manufacturer matches the serving size with the portion size. This is in contrast to a high-sugar soft drink like that in the left-hand image in Figure 7, which they tend to present as having multiple servings.

Throughout my observation at Greggs, I noticed that full sugar soft drinks (not artificially sweetened) are offered more often in large portions. I also noticed during the observation that “full sugar” in this context means not less than 16 g of sugar per portion. I chose 16 g as the limit because those drink choices available in Greggs which have less than 16 g of sugar contain 2 g or less of sugar; these cannot be classed as full sugar as they have a low sugar level yet include sweeteners. To this end, out of the 16 full sugar soft drinks, 14 are available in the 500 ml portion size and 2 are only available in small portion sizes, namely one at 330 ml and the other at 250 ml. The previous literature has discussed this phenomenon extensively. In general, it has been claimed that the portion sizes of food products have increased in the last 50 years (Nielsen and Popkin, 2003). Several studies have revealed that one of the main environmental factors controlling the quantity of food that consumers eat is what is offered to them (Levitsky and Youn, 2004). Thus, if what is offered comes in large portion sizes and quantities, then they will eat more and their total consumption will increase (Rolls et al., 2002). A crossover trial study was conducted by Flood et al. (2006) in the context of sugar-sweetened beverages, involving both female and male participants who were invited to lunch in a laboratory six times over six respective weeks. They were given the same type of food and the same quantities, but different types and portion sizes of sugar-sweetened beverages, including cola, diet cola and water (Flood et al., 2006). The findings revealed that increasing the portion size of sugar-sweetened beverages significantly increased their consumption (Flood et al., 2006). However, the type of drink had no effect and increasing the portion size did not result in a reduction in the amount of food consumed (Flood et al., 2006). Therefore, the total energy intake of the meal increased (Flood et al., 2006).

This is important and relevant to the observation in this study as Greggs offers large portion sizes of full sugar soft drinks. This might drive the participants to consume high quantities of soft drinks and thus high amounts of sugar. What is more interesting is that sometimes there is no cost difference between the large and small portions of soft drinks in Greggs. For example, if a customer chooses the first meal deal at a total cost of £3.25, then if they select a sandwich costing £2.75, the drink that comes with this meal deal will cost £0.50 as long as the meal is takeout and does not include one of the taxed drinks. The customer has many types of drinks to choose from, but because of this meal deal, the drink will cost £0.50 regardless of the portion size. In most situations, there is no logical reason to choose the 330 ml size as the 500 ml soft drink options are the same price in this meal deal and the large portions offer more options. Therefore, the structure of the shop in this particular scenario might act as an enhancer for greater soft drink and sugar consumption. Regarding the bottle labelling for artificially sweetened soft drinks, the portion size tends to equal the serving size; this might be because the sugar content appears to be very low.

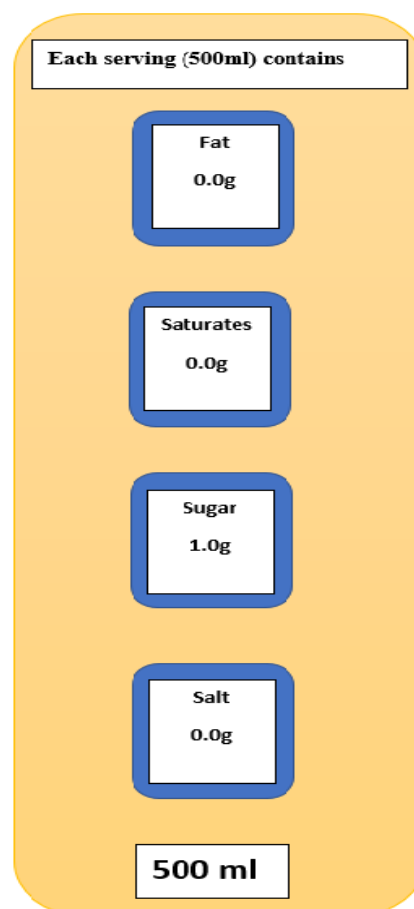


Figure 8. Labelling for an artificially sweetened soft drink.

Figure 8 shows an artificially sweetened soft drink bottle containing 500 ml, whereby the serving size matches the portion size. The sugar content in grams appears to be very low on the bottle, namely 1 g, because most of the sweetness of this soft drink comes from artificial sweeteners. Manufacturers started to use artificial sweeteners in food products around 100 years ago, such as soft drinks, cereals and desserts (Suez et al., 2014). These have become very common for many reasons, including the fact that they have a very low caloric content in comparison with sugar, which increases the energy intake and thus the caloric content of food (Suez et al., 2014). Suez et al. (2014) have shown that these “non-caloric artificial sweeteners” can result in a condition called “glucose intolerance”.

A systematic review was performed by Greenwood et al. (2014), aiming to investigate the link between the consumption of sugar-sweetened beverages and artificially sweetened beverages and the risk of type 2 diabetes (Greenwood et al., 2014). The meta-analysis revealed that there is an association between the consumption of sugar-sweetened beverages and artificially sweetened beverages and the risk of type 2 diabetes (Greenwood et al., 2014). However, this link is stronger in the case of sugar-sweetened beverages than it is for artificially sweetened beverages (Greenwood et al., 2014). Pepino et al. (2013) conducted a study on obese participants in which a case group took the artificial sweetener sucralose, the participants showed an increase in both glucose level and insulin secretion following the ingestion, compared with a controlled group that was offered water instead of sucralose.

In terms of the sugar tax, there are 3 drinks in Greggs for which the customer needs to pay an extra tax. Extra taxes for these drinks are £0.07 for the first drink with a sugar content of 27 g, £0.10 for the second drink with a sugar content of 35 g, and £0.14 for the soft drink with a sugar content of 54 g. Hence, if the customer decides to choose a meal deal and the drink is, for example, the soft drink with the 27 g sugar content, then the customer will have to pay the price of the meal deal and this additional tax, amounting to £3.32. If we examine the soft drink prices and their taxes, we see that there 3 taxes for the soft drinks. The first soft drink with a sugar content of 35 g costs £0.95. This soft drink has a £0.10 tax, which is around 10.5% of the original price of the soft drink. The second taxed soft drink contains 27.5 g of sugar, its original price outside the meal deal is £1.47, and it has a tax of £0.07. Thus, the tax is 4.7% of the original price. Winkler (2012) claims that a soft drinks tax of 10% contributes to a reduction of only 7.5 ml per day per individual, which is a very little amount of sugar per day.

According to Briggs et al. (2013), a sugar tax of 20% on soft drinks would lead to a 1.3% reduction in obesity in the UK, whereby this effect would be even greater for young individuals under the age of 30 as these are the most frequent consumers of soft drinks. In other words, it would reduce the burden of obesity by around 180,000 adult individuals (Briggs et al., 2013). Meanwhile, the same study indicated that a 10% tax would result in a reduction in obesity for around 89,400 obese adults in the UK, that is, a 10% tax has half of the effect of a 20% tax (Briggs et al., 2013).

One of the taxes seen in Greggs, which is approximately 10%, has little effect according to Winkler 2012, while according to Briggs et al. (2013), it has the effect of reducing obesity. Regardless of whether a 10% tax is effective, Greggs also presents an inconsistency in terms of the sugar tax. There are different soft drinks containing around 16 g of sugar, but the tax is applied to only some of these drinks. The problem lies in the fact that while Greggs applies a 10% tax, it is not applicable for all soft drinks. As mentioned above, there are three taxed soft drinks in Greggs. When the customer wants to buy them, they need to pay this tax, and these soft drinks have almost the highest sugar contents among the drinks available in this shop. Meanwhile, it was found that there are other soft drinks with sugar contents of around 16 g, but no tax is imposed on them. In addition, I have found that one juice contains around 53 g of sugar and another contains 56 g of sugar, but these are tax free. As mentioned above, this inconsistency in terms of the sugar tax may lower the intended effect of reducing the purchase of sweetened drinks.

In the conclusion, Guasch-Ferré and Hu (2019) stated that despite the fact that fresh juices may have less negative health consequences than soft drinks, they should not be consumed at a high level, especially by people who are at high risk of obesity, as they contain sugars and calories at levels equal to soft drinks. In addition, Muraki et al. (2013) conducted a large prospective cohort study on 187,382 participants over 24 years to examine the health effect of fruit juice consumption, their findings suggested a link between a high consumption of fruit juices and the risk of developing diabetes type 2.

Throughout my observation in Greggs, I found that the advertising for the available meal deals is very clear and visible. There are many posters both outside and inside the location, highlighting and advertising the meal deals available in this shop. The advertising is written on the poster in a very large font, possibly to gain the attention of customers. Interestingly, the information about the abovementioned tax on three types of soft drink is written on these

posters, but in an extremely small font in comparison to the information about the meal deals. If the information on the taxed soft drinks was written a font as large as that advertising the meal deals, this may act as a preventable factor and warn the customer not to buy soft drinks with high sugar contents. However, the writing is too small for the customer to notice that they must pay a tax. From the perspective of social practice theory, the advertising of meal deals can attract consumers through the meanings these advertisements attach to meal deals. For example, the advertisement might show that you get a main sandwich and drink in a meal deal at a low price, telling consumers that meal deals are value-for-money.

6.3 Meal deals: their meaning and function in everyday life

This main theme explains, from participants' perspectives, what a meal deal is, highlighting their major 'material components' whilst providing examples. It also highlights other aspects of meal deals such as their price, the suppliers that sell them and the times and places where they are consumed are important factors related to the decision to consume them. Furthermore, it shows how consumers perceive the arrangement and construction of meal deals on shop shelves. It is important to understand the features of meal deals that make consumers choose them over other kinds of meal. In addition, it is important to understand the context of meal deals as well as soft drinks as one of their components. Therefore, learning about meal deals will help us to know more about soft drinks. Alongside my analyses, I draw a comparison between meal deals and other meals (restaurant and home-cooked meals) to better understand how meal deals differ from other kinds of meals.

6.3.1 Material components of a meal deal

Usually, a meal deal is a combination of three distinct items. Fabian defined the concept of a meal deal saying:

“What I know about meal deals is that when you get a main ingredient like a sandwich or a salad or something, with a meal deal, you add a pound or two pounds and you get a drink and a treat like cookies or a crisp or something like that.” (Fabian)

According to Fabian, a meal deal is a set of three items including a main product and two other items that the consumer chooses. These additional items are a drink and a snack or what Fabian calls a “treat”.

Hani’s definition was very close to Fabian’s:

“I see they have a lot of meal deals where you get three different types, usually a drink, a side order and a sandwich.” (Hani)

Like Fabian, Hani explains a meal deal as a combination of three items, a sandwich (the main item), a drink and a treat. Fabian and Hani provide almost the same definition of a meal deal but they use different terms, for example, one calling the snack a “treat” and another calling it a “side order”. To get a sense of what the specific components of a meal deal could be, Table 16 below presents a list of most of the mains, drinks and snacks that were mentioned by the study participants during the formal interviews.

Table 16. Mains options, drinks options and snack options within the meal deals.

Main	Drink	Snack
Sandwiches	Water	Fruit
Falafel Mayo prawn Tuna Chicken Chicken salad		Strawberry Bananas Apple Pineapple Mango Grapes
Noodles	Coffee	Granola
Noodles with vegetables Noodles with meat Noodles with chicken Noodles with pork		
Wraps	Fruit juices	Oat bar
	Mango Pineapple Orange	
Pasta	Full-sugar soft drinks	Wedges
	Pepsi Coca Cola Fanta	
Salads	Sugar-free soft drink	Chips
	Diet Pepsi Diet Coca Cola	Popcorn
		Cake
		Chocolate
		Cookies
		Crisps

6.3.2 Diversity of options within meal deals

One of the main features of the meal deal phenomenon is that the consumer has lots of options to select from and a wide range of choices. Tiffany explains this below:

“Lots of options. Yeah. Many options. More. More options. Yeah. It's a variety of main or side dishes and also drink. Yeah. For example, from what I noticed, from Sainsbury, the drink you can get is only soft drink, fruit juice, which is not a real fruit juice, and water. While in the Co-op Food, you can get coffee as well. Ready-made coffee, coffee in a bottle. Yeah. So it's just kind of enjoy for me. Oh, there's lots of options. I'm very happy. Yeah.”

(Tiffany)

Tiffany stated that meal deals always come with different options, whether in terms of the main item or the sides. She explained how the drinks options include different categories of drink, for example, water, coffee, soft drinks, and fruit juices. The variety of products available is also a feature of Manal's account of meal deals. Like Tiffany, Manal explains that meal deals are not restricted to limited products but quite the opposite, they provide the consumer with many alternatives to choose from:

“I think with meal deals, you've got that option.... So, you can maybe get, I don't know, a chicken sandwich. And then if you want the chocolate with it, it's within that deal anyway. So, you can get a chocolate, or you can get a cake. And then you can go drink, whichever you are.” (Manal)

Manal has found that she can choose from various types of snacks when buying a meal deal, such as a piece of cake or chocolate, and that this diversity of options is also applicable to the drinks choices.

The range of choices offered in meal deals at shops is usually wide enough to accommodate a variety of lifestyles including both healthy and unhealthy groups. Fabian raised this issue in his discussion of meal deals:

“Yeah, I wouldn't say it's unhealthy because it has some unhealthy components. It depends really on what you're getting because with the meal deal, usually you can get a water, you can go a Pepsi or Cola. It's up to you. And at the same time, some groceries offer you to take a banana instead of chips or crisp or a treat. So, it's up to you.” (Fabian)

Fabian believes that the variety of snacks and drinks available in meals deals is wide enough to fit lots of different lifestyles and approaches to food. In particular, Fabian argues that meal deals offer different types of snacks, for example, bananas for those who maintain a healthy diet and chips for others. Manal agreed with Fabian that meal deal options are wide enough to suit people who follow a healthy diet:

“And then a drink with it as well, so any drinks. So if I want to go for a healthy drink, Innocent smoothie.” (Manal)

Manal explained that, according to her experience, if she wanted to follow and maintain a healthy diet she might go for an Innocent Smoothie as it would meet her needs.

In the literature on marketing, there is a concept that is important to discuss here, which is called marketing segmentation. This is the process of dividing the market into smaller groups or segments of particular consumers who share certain interests (Zhou et al., 2020). For example, in food marketing, there are several different groups of consumers including vegetarians, who do not eat meat but whose food might include some animal products such as dairy and eggs. Another group is vegans, who avoid the consumption of animal products entirely. I found evidence of this marketing segmentation in the context of these meal deals as suppliers are clearly aware of specific consumer groups. Susan’s experience of meal deals reflects this segmentation as she pointed out that meal deals offer options for vegetarians and vegans:

“And they also have different options, so it's available for everyone. So if you're a vegan or you're vegetarian, there are always options for you to go for. And you're not restricted to not finding something that doesn't go with your diet. And yeah, I think that's what makes it to me, the variety of things that it offers.” (Susan)

Susan’s account reveals that meal deal suppliers recognise the needs of vegetarians and vegans and introduce choices to suit them. Thus, meal deals seem to offer a diversity of selections and choices that fit a variety of people. In their study, Zhou et al. (2020) discuss some of the advantages of marketing segmentation and argue that some benefit the consumer and some benefit the supplier. Marketing segmentation leads to a better understanding of consumer behaviours and therefore can increase consumer satisfaction (Zhou et al., 2020).

From the interviews, it appears that meal deal suppliers are applying marketing segmentation to increase consumer satisfaction by offering them options that can satisfy their needs. This is evident from Fabian’s experience, who stated:

“Sometimes even when I’m on diet...I choose meal deals that have lower calories. As I told you, sometimes I get a banana instead of the crisp and I get water.” (Fabian)

Occasionally, Fabian goes on a diet but this does not stop him from consuming meal deals. As he explains, he can still find the kinds of food he wants within the meal deal choices even when he is trying to consume fewer calories.

6.3.3 Value for money

The study participants identify many important characteristics of the meal deal phenomenon in relation to price and offer. During the formal interview, Fabian stated:

“Yeah, I’ll just make it a meal deal. It’s cheaper. I’m not paying much more. And I get a sandwich and a drink and a treat at the same time for a reasonable price.” (Fabian)

According to Fabian, meal deals are inexpensive and this is one of the reasons he buys them. He believes that buying three items together in the form of a meal deal represents good value for money. To get an idea of meal deal prices, Table 17 below shows the different prices of the various meal deals mentioned by the study participants during the interviews.

Table 17. Prices of meal deals in different locations.

Shop meal deal prices	Restaurant meal deal prices	Meal deal prices (no location identified)
£3.5	£5	£4
	£6	£5

Previously, I discussed meal deal prices from the study participants’ perspective and gave several examples to show that the participants consider meal deals to be inexpensive. However, it is important to understand how the price is constructed by suppliers and how the offer is made and to understand the context and how meal deals are brought together. This is because

many participants noted that the price of deals is low in certain situations and in other situations the discounts are no longer available. Hani elaborated on this point, saying that:

“I see they have a lot of meal deals where you get three different types, usually a drink, a side order and a sandwich. And usually when you get them grouped up, you get them significantly cheaper than getting everything [separately].” (Hani)

Hani explains that meal deal offers remain at a low price only if the consumer takes the whole package together, that is, the main (sandwich), drink and snack. However, if a consumer were to buy each item separately, the price would go up again and their order would no longer be a meal deal. Fabian supported this claim, commenting:

“You get three things for less money, if you buy all of them separately.” (Fabian)

In marketing literature, this is called a “bundling strategy” and it is found in restaurants in various models such as the “lunch special” or “meal special”, in which many items are sold together at a special low cost (Nazlan et al., 2018). According to Pavesic (1999), the bundling strategy can benefit the consumer. There are two types of bundling strategy: “mixed bundling” and “pure bundling” (Schwartz and Cohen, 1999). “Mixed bundling” is when the items in the bundle are cheaper when bought together but they can be bought separately outside the deal (Schwartz and Cohen, 1999). In contrast, pure bundling is when the bundle items can only be bought within the bundle (Schwartz and Cohen, 1999). Based on the above, meal deals fall under the mixed bundling strategy as Hani and Fabian both make it clear that the items in the meal deal can be bought separately but for a higher price.

The mixed bundling marketing strategy has several goals. One goal is to sell items that customers would not usually buy in isolation (Reeves, 2020). Including these items in the bundle deal can increase their purchase rate and consumption (Reeves, 2020). Furthermore, this bundling strategy can make the bundled items more appealing to consumers, increasing purchases and profits for sellers (Sharpe and Staelin, 2010). Increasing sales is, of course, a central goal of this strategy (Yadav and Monroe, 1993).

The goal of bundling is evident in the meal deal context as the formal interview with Tiffany, in particular, reveals. When I asked her why she chooses meal deals over other food choices and meals, such as eating at home or eating a big meal at a restaurant, she answered:

“It's come with main dish and side dish and also drink...It's cheap, you can get stomach full within the price below four pounds. I thought it's worth to pay.” (Tiffany)

Tiffany sees meal deals, which include a sandwich and two other items, as a good deal for her as she gets a complete meal for a reasonable price. The bundled items (the meal deal) looks attractive to her because, as she mentions at the end of the above quote, they are worth the price she will pay. In addition, when I asked Alana during the formal interviews about her experience of meal deals from shops and libraries, she told me:

“But because it's cheaper. So I just pick the three things to have meal deal and just pay the price that cheaper. How can I say? Is like for now I don't want to eat it, but it's fine because it's cheaper. And when sometime if I hungry, I just have snack. And it's like, normally I don't buy sweet or drinks or Pepsi or something. I don't have it in my room. So it's good to buy it with cheaper price with meal deal. It's like, I try to control to don't drink too much of soft drink, so I don't buy it at my room. But then because of meal deal is cheaper, I can buy it.”

(Alana)

For Alana, the meal deal offer is very attractive, so much so that even though she does not want all of the material components of the meal deal, such as the drink or snack, she still buys the combo. She indicated that she usually does not consume snacks or drinks unless they come in a meal deal. But also notice how she will consume the soft drink even if she does not really want one.

Benjamin feels the same as Alana does about the meal deal offers available. When I asked him during the informal interview about why he had bought the full-sugar soft drink that he was drinking at the time, he told me:

“But at, at this moment. It is because, in the shop they have a meal deal ...and there are not any like juice or ... I would rather have juice, to be honest, but they did not offer it in the meal deal, so I have to have that. And they do not have many zero, like zero sugar or low sugar ones, so I just have to pick that, because it's less expensive” (Benjamin)

Benjamin explained that he had bought the soft drink only because of the attractiveness of the meal deal offer. The full-sugar soft drink was not his drink preference, he got it only because of the inexpensive meal deal offer. Bella's response confirms what Benjamin and Alana state about meal deal offers. When we talked about soft drinks, she said:

“Um, I don't know, it's normally cheaper to get like something [a soft drink] over in at the shop than here. With like meal deal, it's like, suppose it entices you more since it's in the meal deal, it and it would make it cheaper, with like the bigger bottle” (Bella)

Bella's account indicates that meal deal offers are extremely attractive and drive her to buy the meal deal. According to Bella, one of the attractive elements of these offers is that soft drinks are cheaper as part of a meal deal and are offered in a large size.

To properly understand the extent to which meal deals really are a cheap option, it is important to recognise some of the key differences between meal deals and other meals, such as meals sold in restaurants, which I will refer to from now on as 'restaurant meals'. In this context, a 'restaurant' is any type of restaurant including fast-food diners. Therefore, a restaurant meal could be, for example, a burger, fries and a drink. Another example of a restaurant meal is rice, chicken and a drink. Additionally, as we will see below, meal deals can be bought from some restaurants. For clarity, 'restaurant meals' in this chapter refer to any meal that can be bought from a restaurant, whether it is a fast-food restaurant or another type, *other than meal deals*.

Fabian discussed the price difference between restaurants and meal deals, saying:

“I think they're cheaper, maybe not much cheaper. It depends on the other restaurant, you cannot make general comparison without specifics. But if I'm thinking about it, for me, let's say if I go to Subway and have a meal deal, it would cost me five, six pounds. When I go to other restaurants like burger restaurants or something like that, maybe it will cost me more, but not always. It depends the amount of hunger that I have and what I took. But I think in general, they're cheaper[meal deal], especially if you think about meal deals that bought in groceries.” (Fabian)

Fabian finds comparing restaurant and meal deal prices difficult as restaurant prices vary from one place to another and the amount of food he will eat at a restaurant will depend on how hungry he is. However, in general, Fabian argues that it is cheaper to buy meal deals than restaurants meals including burgers, particularly if the meal deals are bought from shops or what he called “groceries” (meal deals can be bought from different places including restaurants, for example, Subway, which will be discussed under another theme). From her experience of meal deals, Susan also highlights some key information about the price difference between meal deals and restaurant meals.

“Yeah. So the first one would be that fast food chains, because it's a branded name and they're selling you a meal, it's going to be a lot more pricey than what you would have to pay to get from somewhere else. So, if I go and I buy a meal from McDonald's, I pay roughly maybe six, seven pounds maybe. But if I go to one of the supermarkets and I buy one of their meal deals, it's going to be like 3.50 quid. So yeah, that's the first thing. It's a lot more expensive in fast food chains.” (Susan)

Overall, it seems that Susan is in complete agreement with Fabian as both state that when meal deals are bought from shops (supermarkets or groceries) they are cheaper than restaurant meals. However, sometimes, an overlap in pricing may occur for the prices of meal deals and restaurant meals when meal deals are sold by restaurants. For example, according to Fabian, a meal deal from Subway (a meal deal from a fast food restaurant) may cost five or six pounds. Nonetheless, Susan reports that a meal deal from McDonald's may cost six to seven pounds while a meal deal from a shop would cost around £3.50, which is far cheaper.

It seems that meal deal prices, according to the study participants, are cheap in general particularly if they are brought from shops and supermarkets. Meal deals prices and the way that these prices are constructed by bundling items together and offering the whole package at a low cost can make the meal deal attractive to consumers and encourage their consumption.

6.3.4 Ubiquity of meal deals

To fully comprehend the concept of meal deals, it is important to identify the locations and settings where meal deals are sold. The formal interviews reveal that one of the main characteristics of the meal deal phenomenon is that it has the quality and condition of being widely available:

“All the shops, like I said, if they're accessible, they're all in the correct spot. So, there's some near my workplace because I work in the city centre, there's some near the gym. There's some near the university. That's why I like it because it's accessible. I can get it whenever I want to.” (Manal)

Manal describes being able to find meal deals whenever she wants. Meal deals, from her perspective, are omnipresent and they can be found in educational institutions such as universities, around university sports centres and workplaces in the city centre. Relevant to this wide availability of meal deals are the various types of sellers who offer them. The fact that

meal deals are available everywhere could be attributed to the various suppliers that sell them. On this topic, Manal stated:

“You've got Sainsbury’s, you've got Tesco, you've got two or three different Boots stores. So, if I wanted to go Boots one day, I can go Boots.” (Manal)

Manal indicated that meal deals are sold from diverse places from supermarkets, like Sainsbury’s and Tesco, to pharmacies such as Boots. Additionally, Alana asserts that meal deals can be sold at restaurants, too, as well as in university buildings and libraries:

“The meal deal at the Diamond [library], Art Tower and Chinese restaurant.” (Alana)

Table 18 below shows the places where meal deals are sold according to the study participants.

Table 18. Meal deal suppliers.

Shops that offer meal deals	Pharmacies that offer meal deals	Restaurants that offer meal deals	University-related spaces that offer meal deals
Sainsbury’s	Boots	Greggs	Students’ Union
Tesco		Subway	Diamond Library
Co-op Food		Chinese restaurants	Information Common Library

In the literature, the link between food availability and consumption has been explored extensively. However, as mentioned above, it is difficult to find information about the specific link between meal deal availability and consumption levels. Meal deals as a phenomenon are under-researched in public health. Therefore, it was necessary to explore alternative literature to establish if this is the case. Evidence about the association between food availability and consumption level in general can provide circumstantial insight into meal deal consumption. One proxy measure of their effectiveness on driving consumption is the relationship between availability of fast food restaurants and consumption. Moore et al. (2009) found that the likelihood of fast food consumption increases by 11-61% when fast food is available in one’s neighbourhood. Moreover, Longacre et al. (2012) found that individuals who live in small cities that contain five or more fast food restaurants will consume 30% more fast food than

people whose cities have fewer fast food restaurants. Given how widely available meal deals are, it is vital to pay attention to the material components of meal deals as their availability might encourage the consumption of any unhealthy foods that are part of meal deals.

6.3.5 Simplicity

A further key element of meal deals is how they are arranged in the spaces where people buy them and how consumers view the arrangement of meal deals in shops, restaurants, pharmacies and so on. One of the primary advantages of the meal deal phenomenon is its quality of being uncomplicated in terms of its material components and construction. Meal deals are straightforward. Hani describes this quality in some detail, saying:

“And they make it very simple because always, when you go in, they organize it in a way that it's all in the same fridge. So once you finish one aisle, you get to grab everything that you need [main item, drink and snack], and they have it labelled and categorized and things like that.” (Hani)

In his account, Hani focuses on the simplicity of the construction of meal deals in shops. He reports that meal deal sellers tend to arrange the material components of meal deals, including the main items, drinks and snacks, in a way that is convenient and easy to deal with for customers. According to Hani, all the material components of meal deals are positioned along one passage. Hani added further detail about the physical arrangement of meal deals at shops such as Sainsbury's and Tesco:

“Such as Sainsbury's and Tesco's where you have like the shelves and the shelves are marked with red tape. That red tape means that this part of the shelf is included in the meal deals. So you get to start with a sandwich, crisps and a drink. That was my main experience with them.” (Hani)

In Hani's experience, meal deal suppliers place and organise meal deals on shelves in a way that is clear and simple. They not only put them all in the one aisle, but they also mark the material components of the meal deals on shelves with a red sign so that consumers can quickly and easily see that a particular drink, for example, is part of the deal. Tiffany supports this claim about the simple construction of meal deals, adding:

“Yeah. I think it's a very simple thing that you can... It's the first shelf you can see when you walk into those store or supermarket. It's come with main dish and side dish and also drink.”

(Tiffany)

Furthermore, Tiffany observes that suppliers of meal deals at shops and supermarkets tend to place meal deals in the foreground where anyone visiting the shop can see the offer as soon as they enter.

6.3.6 Labelling enables choices

The National Health Service (2018) explains that in the UK, suppliers and manufacturers of food products provide nutritional information about the food on the front of the packaging. This includes how many grams of salt, calories and kilojoules are in an item as well as how much fat, saturated fat and sugar it contains (The National Health Service, 2018). Usually, these values need to be displayed per 100 grams of the product, but they can also be provided per package for the whole portion (National Health Service, 2018). Also, more information should be available on the back of the package (National Health Service, 2018). In her interview, Manal discussed the nutritional information on meal deals in the following terms:

“I find meal deals healthier because you can see how many calories each item has, what content is there. You can look at the ingredients, whereas a meal deal, all the information's there, and you can go on Tesco's website or Sainsbury's website to check the ingredients.” (Manal)

In Manal's experience of meal deals, she has found that the nutritional information of meal deal items is visible and written clearly including the number of calories contained in meal deal items. Her interview responses show that manufacturers and suppliers such as Tesco and Sainsbury's ensure nutritional information about meal deals and their ingredient lists are available on the internet, in particular their official website, so consumers can easily access this data. Manal continued to discuss this point and provided a comparison of this aspect of meal deals with restaurant meals, finding that more information is an advantage:

“Whereas restaurants, you can't do that...They could put on maybe their menu, this is a chicken risotto, but you don't know what else is in there. They tell you minimum details.”

(Manal)

From her perspective, the nutritional information and labelling at restaurants are not like for meal deals as restaurants do not provide you with full information about the nutrition of meals. In restaurants, nutritional information and ingredient lists are minimal so the consumer is not fully aware of what their meal contains.

Food labelling has been discussed in the literature as a way to help consumers and change their behaviour so they choose healthy foods over unhealthy ones. Cecchini and Warin (2016) conducted a study to measure the effectiveness of food labelling on making people choose healthy options and reduce their calorie intake. They did a systematic review and meta-analysis in which they included a randomised study design. They concluded that food labelling may act increase the likelihood that consumers will choose healthier foods. However, the results of this study were statistically insignificant.

Regardless of the effectiveness of food labelling and whether it can change people's behaviour and encourage them to make healthy food choices, Manal suggests that being informed is an advantage. It is one of the characteristics of meal deals that suppliers tend to present nutritional and ingredient information on meal deal items, while this information is not clearly found on restaurant menus.

6.3.7 Not a proper meal

The participants of this study identified another essential feature of meal deals, the idea that a meal deal is not a proper meal. In my formal interview with Hani about his daily food schedule, he described the attributes of meal deals:

“Sometimes when I don't have time to really get a lunch, I don't have time to get a proper, proper lunch. I usually just stop by, grab a quick meal deal.” (Hani)

For Hani, meal deals are not a “proper” meal. In Hani's opinion, a meal deal does not qualify as a proper or big meal. The same opinion was expressed by Alana when I asked her if she had anything she wanted to add about meal deals:

“Is like I think I should have rice for my main course. Yeah. So that why meal deal is just my snack. All of meal deal is like just my snake...Right. But for sandwich actually it not for main course. So it's like sometime when I buy a meal deal, it's like for short break... Because it just sandwich for me. And in Thailand we have sandwich for break time, for snack. Is like snack.”

(Alana)

Alana's response again reflects this noteworthy feature of meal deals as "not a proper meal". She makes it clear that she does not see meal deals as full meals but rather as snacks. Her reason for this is that the content of meal deals, in particular the sandwich, does not count as a proper meal for her in her culture. Later in the interview, Alana again discussed meal deals as snacks rather than real meals:

"So that's why I always have meal deal and then go to restaurant and have main course again.... So if I have meal deal I can work after have meal deal just only one hour, I think more than two. And then I have to go out and find some food." (Alana)

Meal deals are not a proper meal because they do not fill you up for long. Alana states that a couple of hours after eating a meal deal, she will be hungry again and will go to a restaurant to eat. Fabian offers an explanation for why Alana may be hungry again so quickly:

"It's not a big amount of foods [meal deals]." (Fabian)

The study participants not only talk about meal deals as not being proper meals but also discuss what they think proper or big meals are and where they can be found. According to the participants, the concept of the "big" meal or "proper" meal is linked to home-cooked meals and meals in restaurants. When Hani was talking about his experience of food in general, he added:

"Other times I go to a restaurant. If I have more time, I go to restaurant to sit down and eat a big meal... we go to restaurants. We go for a big, big meal ... a three course meal." (Hani)

For Hani, restaurant meals are big meals. A meal that he goes and eats at a restaurant with three courses will provide a large amount of food, unlike a meal deal. Fabian sees things the same way:

"I have to go from there to there, and I don't have really enough time to sit at a restaurant to eat a proper meal. So I choose to get a meal deal to eat it quickly and whenever I want..."

(Fabian)

This is an interesting reflection from Fabian who gives a description of a proper meal as a meal in a restaurant but not a meal deal. Fabian continues to discuss and explain what a proper meal is, providing some examples:

“Okay. I usually go for a large meal because I told you, I go to restaurants when I have a cheat meal or something like that. So I usually have a big meal. For example, if I go to a burger restaurant, I’ll get a double burger and a big fries and a big drink, a diet drink, and that’s it.” (Fabian)

In Fabian’s account, we can again see the link between restaurant meals and big meals. He follows up his description of a big meal with an example: a double burger, large fries and a drink.

In Alana’s account, she said that she considered meal deals to be a snack and gave an example of a proper meal as rice, while here Fabian gives an example of a proper meal as a burger, fries and drink. However, restaurant meals were not the only meals that the study participants considered proper meals. There was another kind of meal that they gave the title of a “proper meal”. When Tiffany was talking about her food routine, she said:

“But dinner would be a big meal for me. I would say I cook a proper food.” (Tiffany)

According to Tiffany, a home-cooked meal is another kind of proper meal. In summary, from the study participants’ point of view, meal deals are not a proper meal. For Alana, this is because the content of meal deals, such as sandwiches are too small to be a main course. Fabian also stated that meal deals do not include a “big amount of food”. A proper or big meal is a meal that you get from restaurants or a meal that is cooked at home.

6.3.8 Temporal and spatial arrangement of meal deals

Warde (2016) discusses how the practice of eating food can be classified and conceptualises according to two factors: time and location. The author provides several examples to illustrate this idea. For instance, Warde (2016) explains how the concept of lunch is linked with eating out, while a snack is something that is consumed on the street and the main meal on Christmas day takes place at dinner time and at home. The meal deal is another eating practice that tends to be linked with a certain time and location. In the interviews with the study participants, this research revealed some facts about the temporal and spatial arrangements of the phenomenon of meal deals. In this regard, Alana pointed out:

“Meal deal is might be some food that have only specific time, not all day.” (Alana)

In Alana's experience, consuming a meal deal is not a practice that the individual engages in at any time of the day, rather, it is a meal that is consumed at specific times. Fabian has the same perception of meal deals:

"I go for meal deals on specific occasion." (Fabian)

Fabian's and Alana's accounts both highlight that the performance of the practice of meal deal consumption takes place at a set time. All the study participants are in agreement on this point and state clearly in the formal interviews that they eat meal deals at specific times:

"A Meal deal is something you'd get on your lunch break." (Yara)

Yara's understanding of a meal deal is that it is a meal that is eaten at lunchtime. Other study participants said the same thing and added other information about the practice or eating meal deals, such as:

"For me meal deal is like for short break. Not for the main, for dinner [not for the dinner], for lunch for me." (Tiffany)

In her interview, Tiffany confirmed that she practices the consumption of meal deals at lunch, adding that she does not link meal deals with dinnertime. Instead, dinnertime is associated with home-cooked meals:

"Dinner time. We always eat at home... So at night we make a meal." (Hani)

From the above quotes, it is clear that, in terms of time, meal deals are linked with lunchtime and cooking is linked with dinner.

In relation to location, if we look in detail at the answers provided by Hani, we see that home-cooked meals are eaten in the home, but meal deals are consumed and eaten at lunch when people are outside the home. The study participants' responses reveal the spatial dimensions of the meal deal phenomena, that is, where meal deals are eaten. Interestingly, the locations where the participants eat meal deals vary and meal deals are not associated with one place. Below is a list of a few of the locations where the participants stated they consume meal deals:

- Libraries
- Workplace
- Restaurants
- Airport
- Train

It seems that the practice of meal deal consumption occurs in different places. It is a meal that is consumed anywhere, as Susan expressed when she said that she eats meal deals:

“On the go.” (Susan)

There is no doubt that there is a meaning behind why meal deal consumption is linked with lunch and why it is consumed at various locations “on the go”. There is a reason people eat dinner at home. This practice has a meaning, which could be that in some cultures dinner is a good time to connect with family, to relax together and have a chance to talk with family members. During my formal interview with Hani about his daily food routine, he indicated one of the meanings behind the connection between meal deal consumption and lunchtime and why meal deals are consumed at various locations on the go:

“Because lunchtime is crowded.” (Hani)

While dinner is often attached to family, chatting and relaxing, meal deal consumption is linked with the busy hours of the day, with rushing around and having a lot to do. Meal deals are eaten when individuals are caught up doing several tasks, for example, when they are at libraries, the airport or on the train. It is at busy times and these locations that you will find meal deals. Moreover, when the study participants consume meal deals it is because they offer a solution for consumers. These solutions will be discussed below in section 6.3.10, 6.3.11 and 6.3.12.

6.3.9 Interim summary

Up to now I have discussed the features of the meal deal and its general properties. I have identified some of the unique features of meal deals, which make them attractive to consumers, like their low price and the use of the mixed bundling strategy. In what follows, I focus on the functional nature of meal deals and how they provide solutions for consumers when they choose a meal deal over other kinds of meals such as restaurant and home-cooked meals. This theme explores how meal deals offer solutions for those who do not have time to sit and eat, who want to save the effort of making their own food or who do not have time to think about what to eat. It offers solutions for individuals who lack energy as well. In this theme, I also suggest that the reasons why the meal deal is capable of providing these solutions is because it has the unique features mentioned in the previous themes, including its wide availability, low price, simplicity, and suitability for being eaten on the go. Alongside my analyses, I draw a comparison between meal deals and other meals (restaurant and home-cooked meals) to fully

understand how meal deals have the advantage in providing solutions over other options when considering time and effort.

6.3.10 Meal deals and time

From the participants' reflections, it seems that the consumption of meal deals can save the study participants time. Hani explains that he finds meal deal useful when he is running short on time:

“Sometimes when I don't have time to really get a lunch, I don't have time to get a proper, proper lunch. I usually just stop by, grab a quick meal deal.” (Hani)

When there is not enough time to have a “real” lunch, meal deals are the ideal option for Hani. They are the solution as they save him time. Hani went on to talk about how the meal deal was able to solve the problem of being short on time, saying:

“I will most probably go to the Sainsbury's it's because it's closer, it saves time Hani.....I think they limit the menu and make it very simple and very cheap. So you go sit down and eat and leave very quickly.” (Hani)

In his interview responses, Hani clarifies why he goes for meal deals and how meal deals save him time by suggesting that it is because of their availability in his environment and the existence of a shop near him that sells meal deals. He also suggests that the simplicity of meal deal construction helps save a lot of time as it allows him to consume the meal quickly. In relation to the first theme, the features of meal deals, Hani outlined the manifestation of the simplicity of meal deals by saying that suppliers tend to position the material components of meal deals in shops along one aisle and mark them with red tape so consumers know that they are part of the deal, thus making purchasing meal deals convenient and helping to save consumers time.

A lack of time can be a problem in different situations and circumstances. One of these situations is when individuals travel. When I asked Fabian about the situations where he chooses meal deals over other kinds of meals, he said:

“For example, because I go to London a lot, sometimes I don't have time. I have to catch the train. I have to go from there to there, and I don't have really enough time to sit at a restaurant to eat a proper meal. So I choose to get a meal deal to eat it quickly and whenever

I want. It's easier to eat on trains, on subways, even when you're waiting or something like that. Sometimes you can eat them while you're walking actually, because it's not a big amount of foods.” (Fabian)

Fabian spoke about his experience with meal deals, in particular, the right time to have a meal deal and the solution it offers him. From his perspective, the meal deal is also a solution when there is a lack of time, in particular, when he is about to travel, to catch the train and when the time is too tight to sit and eat a meal at a restaurant. At these times, meal deals provide a solution that helps him to continue quickly with his day. Like Hani, Fabian discussed why he thinks that the consumption of meal deals can solve time problems. He thinks that the flexibility of being able to consume meal deals anywhere on the go helps him to save time. A number of study participants discussed time constraints in lots of different circumstances, such as Susan, who commented:

“We had exams, so I had no time to cook. So I would just wake up.....go to the library and stop by Sainsbury’s to get a meal deal.” (Susan)

According to Susan, on exam days, she does not have time to make and prepare her meal herself as she wants to spend every minute at the library. Therefore, the best and most convenient solution at these times is to grab a meal deal from the shop that is located on her way to the library. Susan also provided other examples of when she lacks time and when meal deals are a solution:

“But I can imagine that later[to buy a meal deal] on when I constantly have to work or I actually you have important meetings and stuff like that, and some days could be a lot more busy than others. I won't always have the luxury to go grocery shopping and start cooking and eat at home.” (Susan)

Susan noted that a lack of time is not only an issue when she has exams but also when she is busy and has many things to do. With a tight schedule, it is not a solution to go and collect ingredients and cook at home but it is a solution to get a meal deal. In addition, Susan clearly explains the reasons why she believes that meal deals save her time:

“But they are more easy, so you put no effort, but you still eat.... The meal deal is grab and go, eat on the way, and they're disposable. So it saves you a lot of time” (Susan)

Similar to other responses, Susan attributes the fact that meal deals can help save her time to the simplicity and convenience of the meal deal and she indicated that this meal is something to consume on the go and that's why she chooses it when she is pressed for time. Susan's perspective is in agreement with what has been described in the literature about the link between food choices and the time factor. In the context of food choices in general, several studies identify convenience as the biggest driver of food choices (Story et al., 2002; Blanck et al., 2009). Moreover, one of the aspects of convenience that is discussed in the literature is time and a meal/food's ability to save consumers the time they would otherwise spend preparing a meal (Jekanowski et al., 2001).

To properly understand to which extent the practice of the consumption of a meal deal helps to solve the time problem, we need to draw a comparison between meal deals and other kinds of meal to see how the time factor affects different meal types, such as home-cooked meals and meals eaten at a restaurant. The study participants explain a number of reasons why home-cooked meals and restaurant meals are not helpful when consumers lack time and when individuals are in a hurry and want to eat. For example, when discussing the differences between a meal deal and a home-cooked meal in terms of time, Hani stated:

“Usually for meal deals, the convenience is usually for us comes down to time, because especially, I guess the biggest comparison is at home. The biggest difference is at home, you have to buy every single ingredient separately. And if you want the drinks, you have to buy them separately. If you want side orders, you have to... And then assemble them at home. But when it comes to meal deals for us, it comes down to time. When we feel like we want to grab something really quick, really easy and feels like a meal. That's time where we usually prefer meal deals.” (Hani)

Hani stressed how convenient a meal deal is when time is a concern. He argues that meal deals require truly little time, you just go and grab it from a shop while you need a lot of time to prepare and eat a home-cooked meal. In his account, Hani focused on the things that we need to do that take time 'before' we can eat a home-cooked meal by stating that individuals need to go to the shop and buy the ingredients for the meal and then individuals also need to make the meal, bringing all the ingredients together. In summary, Hani discussed all the steps required 'before' cooking a meal at home, indicating that these take time. Alana, too, compared meal deals and home-cooked meals but she highlighted another aspect of the differences

between these meals in term of the time factor, which is the time we take to prepare home-cooked meals:

“It's like when we cook is take time, at least maybe one or two hours for cook for every dish. And after we finish, we have to clean it all and that is the worst part for me to clean the dish. So just go out and have a meal deal. In only 10 or 20 minutes, we can finish that course. Not take time.” (Alana)

Alana emphasised the time-consuming aspect of preparing a meal at home, as from her perspective this might take many hours of cooking. In addition, she discussed that the problem of time is not restricted to the time consumed by cooking only but also the many things that might take time ‘after’ the meal is finished. She pointed out that washing the dishes is one of these time-consuming after-dinner tasks when one eats at home. She then talked about how the practice and the process of meal deal consumption can be done very quickly.

In relation to restaurant meals, meal deals and the time factor, the study participants identified several key differences:

“If you want a big meal in a restaurant, you have to sit down, you have to consume a lot of time, just waiting, eating, and things like that, the things go slow, but with meal deals, it goes by very quickly.” (Hani)

It seems that eating a big meal at a restaurant can be as time-consuming as cooking at home. According to Hani, it is mandatory that when you have a meal at a restaurant, you have to sit down and go through a long process of waiting as well as eating. He clarifies that things at a restaurant move at a slow pace, unlike with meal deals, which can be done and consumed quickly on the go. Alana added some points about eating a big meal at a restaurant:

“Why? First because if we go to restaurant this take time. So, we have to have time on that day. And it's like, when we with friend, we love to chit-chat. Right.” (Alana)

Alana feels the same way as Hani, that eating at a restaurant is a time-consuming process as people usually go to restaurants for other reasons than to eat, such as socialising with friends. In conclusion, meal deals are a solution for consumers when they are running short on time. When time is a concern, a meal deal has the advantages over other kinds of meals such as home-cooked and restaurant meals as meal deals can be consumed quickly.

6.3.11 Meal deals and the effort factor

Earlier, we saw how much the consumption of meal deals can save the study participants time. However, in addition to saving them time, the participants also argued that engaging in the practice of meal deal consumption saves them effort as well. When talking about the circumstances in which she chooses a meal deal over other meal options, Alana explained that meal deals are attractive:

“Because I'm lazy to cook.” (Alana)

It seems that she will go for a meal deal, this time, not because she has no time to prepare her own meal but because she does not want to make the effort to cook. According to Alana, it seems that buying and consuming a meal deal is attractive to her because it requires less effort. When I asked Manal why she sometimes has a meal deal instead of preparing a meal at home, she responded:

“You might be tired from work and you can't.” (Manal)

Here, Manal explains that the reason she does not cook at home is that she is tired and cannot be bothered to go to the effort of cooking. At times like this, she goes for a meal deal as buying a meal deal and consuming it seems a process that requires less effort and fits with her tiredness. As I have suggested, the consumption of meal deals saves effort when the individual lacks the strength to perform the practice of cooking at home. However, buying and consuming a meal deal also saves effort in other ways. During the formal interview with Manal about how meal deals can benefit her, she commented:

“It saves me carrying food with me. Say, if I'm going from the gym to work, then work to university, I don't have to put the meal in a fridge.” (Manal)

Manal explained that buying a meal deal means that she does not need to go to the effort of carrying food with her or using a refrigerator. Fabian's accounts about the benefit of meal deals in relation to the effort factor elaborated on Manal's point:

“But to be honest, because I go to London frequently, because I have some work there and when I go to London, sometimes I cannot take my food with me. When I feel hungry, I just stop at any restaurant or any grocery to grab a sandwich or something like that. And I feel hungry and thirsty as well, so I'll go, “Yeah, I'll just make it a meal deal.” (Fabian)

One of the functions of the meal deal is thus to reduce the effort that the individual has to go to in order to eat. For example, if Fabian brought a meal from home he would need to take care of it along his journey and throughout the day and carry it around and this takes more effort. This is not convenient for Fabian, so he preferred not to take and carry food with him but to instead go to any of the many shops that sell meal deals and take one. It appears that a meal deal is the easy, convenient and effortless choice for Fabian. Taking a meal from home as well as going to a restaurant takes more effort than buying a meal deal. In her interview, Manal discussed the difference between eating a big meal at a restaurant and meal deals in the following terms:

“Whereas a restaurant, you have to order a main dish, which is really big. You don't tend to finish sometimes. There's food leftover, basically and you don't want to carry that around. Whereas, a meal deal, it's not going to be left around. You can eat it there and then, because it's a small portion.” (Manal)

Manal's account reflects that even eating at a restaurant will sometimes require more effort than expected as occasionally individuals will not be able to consume all the food they order at the restaurant and will, therefore, need again to “carry” food and take the rest of their meal home with them. However, in the case of a meal deal, there is no need for all this effort as Manal claimed that the portion of food you get in meal deals means that there are no leftovers that the individual then needs to carry with them for the rest of the day.

6.3.12 Meal deals and the thinking factor

From the participants' reflections, I found that meal deals offer a unique solution for those individuals who do not want to engage in the process of thinking about what they should eat for their meals. When I asked Hani about when he consumes meal deals, he explained:

“When we don't have to think we go for meal deals.” (Hani)

Meals, according to Hani, offer a solution when individuals cannot be bothered to think about what they should eat for their meals. Yara agrees:

“When I'm stressing out, I just literally pick anything that's quick and efficient. I always usually get the usual Meal Deal, because it's available. I don't really think about, Right. I want to eat healthy, or anything.” (Yara)

Being able to choose a meal deal when she is under stress is convenient for Yara as picking a meal deal offer means she does not have to “think”. As Yara states, meal deals help her to overcome the thinking obstacle as they are readily available and allow her to quickly get a meal.

6.3.13 Meal deals as nourishment

The findings of this study reveal that meal deals offer a solution when the body lacks strength and energy. During my interview with Susan, I asked her about the function of meal deals and she replied:

“While still making you survive and giving your body what it needs.” (Susan)

According to Susan, meal deals help to keep people going as they provide the body with its basic requirements. When I asked Yara about the benefits of meal deals, she made the same point but expanded on what Susan had said, in particular, about meal deals “giving your body what it needs”, adding:

“If we're just talking about the Meal Deal alone then, like I said, it does fills me for three to four hours. Then I do have good concentration. I mentioned I have the sandwich which I finish and then the drink to go with it. I don't finish the drink all in one go. I have the drink for four hours to keep me hydrated..... I think that's what keeps me functioning so I'm not too tired or drowsy. The food helps me concentrate more.” (Yara)

Yara argues that meal deals provide her with the energy she needs for the day. She explains that meal deals do this in two ways, first, the drink in the meal deal helps Yara to stay hydrated and, second, the food in the meal deal helps her with her concentration.

6.3.14 Interim summary

In what follows, I focus on the responses of the study participants which reveal that the practice of meal deal consumption in some situations encourages the consumption of sugar including snacks and soft drinks. Although we have shown previously that meal deal suppliers provide the consumer with lots of options to choose from, however the next following sub-themes show how meal deals exclude certain kinds of cuisines. In particular, the following discussion examines how the study participants perceive a lack of healthy options in meal deal selections. Additionally, next subthemes highlight what the participants said about meal deals and the

control it gives them over their diet. Specifically, participants reported feeling that eating a meal deal means they lose some control over their diet while eating meals prepared at home gives them full control over what they are eating.

6.3.15 Meal deals encouraging the consumption of unhealthy food

Alana stated during her interview of eating something that she would not have eaten outside the meal deal offer:

“And even is like, sometimes I don't want to eat snack, but because it's cheaper. So I just pick the three things to have meal deal and just pay the price that cheaper. How can I say? Is like for now I don't want to eat it, but it's fine because it's cheaper. And when sometime if I hungry, I just have snack. And it's like, normally I don't buy sweet or drinks or Pepsi or something. I don't have it in my room. So it's good to buy it with cheaper price with meal deal. It's like, I try to control to don't drink too much of soft drink, so I don't buy it at my room. But then because of meal deal is cheaper, I can buy it.” (Alana)

On a typical day, Alana does not buy or eat snacks and she does not have soft drinks such as Pepsi around her. The only reason she buys a snack and a soft drink is because of the appealing offer of a meal deal. The offer is enticing as it includes several items for a low price. Alana chooses meal deals although she is trying to control her soft drink consumption. The offer might act as an obstacle to her efforts and encourage her to consume sugar-based drinks and snacks.

Sophia's account perfectly aligns with what Alana said about the influence of meal deals on soft drink consumption. When I asked Sophia during the informal interview about the situations in which she consumes a soft drink, she replied:

“Yeah, I mean wouldn't say regularly because in my house I might just have water or a squash of juice, but it's really when I'm out, out and about. Um, if I buy a meal deal or yeah, I would say fast food: Subway, Pepsi, that kind of thing.” (Sophia)

Like Alana, Sophia tends to consume water or juice at home but she explains that several triggers can drive her to consume a soft drink when she is outside and one of them is meal deals. Martha also agrees that meal deals can influence soft drink consumption. When I asked her about the reasons behind her soft drink consumption, she responded:

“Because it come with the meal deals. So, I bought a sandwich or something and comes with a soft drink” (Martha)

Martha consumes soft drink only because meal deal offers come with a soft drink. For Rami, too, the meal deal phenomenon is a factor that influences his consumption of soft drink. The soft drinks in meal deals are offered at a low price and thus meal deals encourage his consumption of soft drinks:

“I think meal deal culture is a really big one. So, whenever I go buy lunch often the inclusion of a drink for a cheaper price usually causes me to buy one and then that spills into everyday life” (Rami)

There is a discussion in the literature of the general increase in the consumption of unhealthy food among the population. Sharpe and Staelin (2010) explored one of the main reasons for this increased consumption, the concept of bundling in fast food restaurants. This occurs when a fast food restaurant offers consumers the option to add fries and a soft drink for a low total price although adding these two items can contribute an additional 500 calories to the meal (Sharpe and Staelin, 2010). Stremersch and Tellis (2002) indicate that the idea of bundling food together might drive consumers to buy and eat more than they would if the items were not offered together and the consumer had to buy each item separately

This theme aligns with the findings of Harris and Thomas (2017) who examine the effect of bundling, such as combo meals in fast food restaurants, as an environmental trigger that increases caloric consumption. This study showed participants a fake menu with bundled items like those found in any fast food restaurant. The fake menu featured, for example, a meal of a cheeseburger with bacon and two sides of medium-sized fries and a medium-sized drink as well as other items that can be bought separately. The results show that selling items in a bundle can increase consumers’ consumption of calories especially for those with less awareness. In short, participants tend to choose the meal option when it is available (Harris and Thomas, 2017).

6.3.16 Limited options

Although as it has been discussed under the previous theme that one of the main features of the meal deal phenomenon is the diversity of the choices they offer and the different sellers that offer meal deals, whether they be a shop, pharmacy, restaurant, university buildings such as

libraries or elsewhere, there is another perspective that argues that meal deals in general do not include all varieties of food. Susan discussed this element, stating:

“Because as much as the meal deal is efficient and is nice and everything, but you don't always want to be having a meal deal. You want to try different kinds of food that are not offered by the meal deal. So if I'm craving Italian, or I'm craving sushi, or I'm craving anything, that's not something the meal deal can provide me with.” (Susan)

Susan provided an example of the style of food that is not offered in meal deal choices and indicated that when she wants to consume Italian food, she cannot have a meal deal as they will not offer this option. In the interview, Susan also spoke about the limited choices of the main item of the meal deal (sandwiches) at certain shops:

“The fact that the meal deal, the main part of the meal is always a sandwich and they don't change that constitution. So like in Tesco for example, they have like pastas and stuff like that, but they're not part of the meal deal meal deal. So sometimes it's just like, you don't want bread, you want something else.” (Susan)

Some meal deal sellers do not offer a diverse range of mains such as pasta and their main item choices can be limited to just a few sandwiches although the shop may sell pasta separately, that is, not as part of the meal deal offer.

Alana has had the same experience with meal deals and has found that they often offer limited choices but for Alana, the problem is with drink choices in the meal deal, not the main item. During the interview she complained:

“And if sometimes I cannot find the combinations. Yeah. I think the reason that I will not buy. I mean, if there's has different kind of the combination and sometimes is just only have the thing that I don't like. For example, for drinks, they just have only Fanta or something, but I prefer just Pepsi or Coca Cola. So if they have only Fanta, I do not buy it.” (Ali)

Alana's favourite drinks are Pepsi and Coke, but she explained that this drink is not always available in a meal deal and some suppliers only offering Fanta as part of the meal deal at their shop.

The discussion around food choices and availability becomes much more important when it concerns healthy and unhealthy food availability. Educating people about the dangers of eating unhealthy food and making them solely responsible for their food choices is not a

recommended approach. This approach, called the lifestyle or downstream approach, implicitly assumes that people make free choices, disregarding social structure and social conditions in which these choices are implanted (Cockerham, 2005; Short and Mollborn, 2015).

Thus, it is not ideal to attribute good or bad health solely to individuals' choices and behaviours (Short and Mollborn, 2015). In the context of food consumption, researchers have looked beyond the individual. Many researchers have investigated the association between the food people eat and the food environment (Larson and Story 2009; Caspi et al., 2012). There are many who support the idea that our surrounding environment can influence our food choices and options (Larson and Story 2009). Both people who are in charge of setting policies and researchers have widely discussed how we can make the food environment better so that it positively impacts public health (Minaker et al., 2013). Williams et al. (2010) examine the influences of healthy food availability and increased consumption of healthy food and found a positive link between these two elements. In particular, women who perceived that there was good availability of healthy food, increased their consumption of healthy food including fruits and vegetables more than others who perceived less availability of healthy food in their environment.

The perception of the availability of healthy options within meal deals was discussed during the interviews. The empirical evidence I collected from my interview with Manal suggests that there are few healthy options available within meal deals. However, this finding does not conflict with what was previously discussed under the diversity of options theme that the range of choices offered in terms of snacks within meal deals is usually wide enough to accommodate a variety of lifestyles including both healthy and unhealthy groups. This is because Manal only discusses the issue of healthy options in meal deals in terms of the snacks available:

“When they offer meal deals, when it comes to the snacks, they need to offer more healthy options, because there's so much chocolate and crisps and biscuits that they offer. When it comes to fruits, there's a very tiny section. They need to offer more variety, like I said, blueberries and grapes or a different variation of fruits, not just, okay, we just got two or three options. That's it. There's many people like me who want to have blueberries, who want to have kiwi, but we can't because they don't offer that. You either have apple and grapes and strawberry, or mango, or pineapple, that's it. There's not much variation. They need more variation.” (Manal)

Manal does not deny that there are healthy snack options available within meal deal selections but it seems that Manal does not consider the environment of meal deals to be supportive of healthy choices. She argues that there are many unhealthy snack options, such as chocolate and crisps, and only a limited number of healthy options, for example, a couple of types of fruit. She would like to eat more fruit with her meal deals but she is unable to due to the lack of options. If we apply the results of the study by Williams et al. (2010) to this context, we can conclude that meal deal consumers' consumption of healthy food will be minimised because of their perception of having limited healthy options. Yara agrees with Manal and made the same comment about the meal deals that are sold in shops in libraries:

“There should be more variety of snacks to go with the meal deal. Those shops I've been to is usually the IC [a library], the Diamond [a library]. I feel like as snacks, there should be more nuts and dried fruit, so people are not always going for the chocolate bar and crisps. That's a bit unhealthy.” (Yara)

Yara did not find the food environment of meal deals helpful. She even stated that the types of fruits available are not made appealing and do not encourage consumers to choose these healthy options. In addition, during the interview she complained:

“With the crisp packet and cookies, I think with my opinion that'd fill you up, whereas the fruit options they have, they don't give you a whole fruit. They just give you two or three slices or something. Say for example, there'd be two slices of melon and there'll be two slice of pineapple. Then there might be a couple of slices of apple and a few grapes. In my opinion, based on my experience that does not fill you up.” (Yara)

This is another aspect of the unsupportive environment of the meal deal phenomenon. Yara, previously, provided a comparison of the number of fruit and chocolate meal deal snack choices but she also highlighted an additional negative aspect of snack options, which is the portion size of the fruit snack in the meal deal. According to Yara, the unhealthy snack portion is large enough to fill her stomach. However, the fruit portion is not big enough to fill her up as it is just a few slices of fruit.

6.3.17 Loss of control

One of the evident limitations of the meal deal when it is compared with home-prepared meals is that the consumer cannot fully manage the number of calories in the meal or its ingredients. On this point, Fabian provided a comparison between meal deals and home-cooked meals:

“But I usually don't go for it because I want to control my calories, and I think that's easier from home. Cooking at home, you can control all the components, all the micronutrients, all the food groups that you want to include in your diet.” (Fabian)

In terms of managing your calorie intake, Fabian sees home-cooked meals as more advantageous than meal deals. Fabian considered making meals at home to be the better option as you can decide every ingredient that goes into your meal. Tiffany expressed the same ideas as Fabian when she compared her meal deal at lunch with the home-cooked meal she eats for dinner:

“I think one thing, although both of my meals for example, lunch and dinner, have vegetable, but the amount different. The amount are different because it's a tiny bit from your lunch meal deal. But at a dinner, I can cook as much as I want. Yeah. In terms of, I don't know, I think maybe just my thought. More vegetable is better than less and you reached the required amount of vitamin you needed per day. I don't think that the vegetable in the meal deal would reach that point of nutrient level for each day.” (Tiffany)

For Tiffany, controlling and managing your meal is easier when you cook it yourself at home as you can decide the number of vegetables to include in the meal. In other words, Tiffany can have the recommended daily portion of vegetables if she cooks at home but not when she eats a meal deal as its ingredients are out of her control.

6.4 Summary

In this chapter, I have shown how the construction and arrangement of meal deals can encourage people to consume soft drinks. I have shown that, within a meal deal, full-sugar soft drinks are available more freely than artificially sweetened soft drinks. Additionally, the application of tax on soft drinks is inconsistent. Finally, soft drinks, within some meal deals, are available in a larger portion size than other drinks. I argue that this kind of arrangement can drive people to increase their soft drink consumption. As such, controlling the arrangement of meal deals on shop shelves can help to control soft drink consumption. The next chapter is the

discussion chapter and summarises the main findings and present the contributions of this thesis to the field of public health.

Chapter 7: Discussion

7.1 Introduction and summary of the key findings

This research aims to explore soft drink consumption as a social phenomenon in the context of everyday life. This study identifies several key findings. First, the meaning of soft drink consumption varies according to the context. When they come with meals, soft drinks work as an accompaniment to the meal. Thus, soft drinks in this context act as an enhancer or element that balances some aspect of the meal so the overall taste pleases the consumer. In another context, for example, when soft drinks are consumed before the gym, they provide energy to consumers. In contrast, when the weather is hot, soft drinks act as a way to cool down. Second, soft drink consumption usually does not happen in isolation, indeed, it is implicated in and linked with other social practices, such as studying, eating and socialising, and coexists with them. People consume soft drinks when they eat their meals, socialise and study. Third, my findings show that habit plays an important role in soft drink consumption as some participants indicate that consuming soft drinks with meals is normal for them. Fourth, the environment in the form of meal deals can influence soft drink consumption. Fifth, my findings reveal the process of how the construction and arrangement of meal deals can encourage individuals to consume soft drinks. My sixth key finding concerns the function and the meanings of meal deals in everyday life. My findings show how meal deals are widely available and inexpensive and this can drive individuals to consume soft drinks.

The purpose of this section is to discuss these key findings in light of what is reported about soft drink consumption in the literature and in relation to social practice theory. Next, under the heading “Applying social practice theory to the domain of meal deals”, I will specifically discuss how social practice theory has contributed to our understanding of meal deals and soft drinks. At the end of this chapter, I will outline the limitations of this study.

7.2 Meanings related to soft drink consumption

The discussion of the direct meanings associated with soft drinks is scarce in the public health literature. Overall, there is extremely limited discussion around soft drinks and their associated meanings. For example, most of the studies in the public health literature focus only on the taste of soft drink as the meaning behind its consumption. For example, Block et al. (2013) conduct a study in the US to explore the factors that drive the consumption of a certain type of soft drink among 19-year-old students. The study reveals that taste is an essential factor with price being less important than taste (Block et al., 2013). Also, this study shows that some

participants' attitudes towards soft drink consumption are informed by their perspective on health. The findings of this study are promising but Block et al. (2013) do not shed light on the various meanings of soft drink consumption. Block et al. (2013) find that taste is one of the meanings behind soft drink consumption but in the present study, there are many other meanings behind this practice. Another example of the limited discussion of the meaning of soft drink consumption is the work of Zoellner et al. (2012) who, in their qualitative study, reveal that taste and energy are reasons behind soft drink consumption but do not take their investigation further.

Against this background, the findings of this study reveal a rich tapestry of meanings associated with soft drink consumption. One of the features of the consumption of soft drinks as a social practice reveals that the meaning and function of this practice varies from one context to another. Specifically, what this study reveals is that the function and meanings of soft drink consumption change *in relation to the position of this social practice amongst other social practices*. For example, when soft drinks come with meals they act as an accompaniment to the meal and enhance and balance some aspect of the food so the overall result satisfies the consumer. In another context, when the individual consumes a soft drink before a lecture or before exercising at the gym, they carry a different meaning. In this context, a soft drink acts as an energiser. Furthermore, in hot weather, consumers of soft drinks use them to cool down and to counteract the hot weather with a cold drink. Looking at the meaning of any social practice is important as these meanings allow us to understand the social world (Shove et al., 2012). According to Shove et al. (2012), there are three elements necessary to understanding any social practice, one of which is the meaning behind the practice concerned. Using social practice theory as a framework for my research enabled me to uncover the meanings of soft drink consumption. Finally, identifying these meanings and properly understanding why people consume soft drinks is a vital starting point for any interventions directed at this social practice. This analysis suggests that finding a substitution for soft drinks is not going to be an easy task because it is not only necessary to find a drink that tastes good but a drink that can fulfil a range of different functions.

7.3 Practices associated with soft drink consumption.

In the literature review, it can be seen that most of the existing work on soft drink consumption does not explicitly discuss that soft drink consumption coexists with other social practices. One of the best papers to indirectly address this concept is Hattersley et al. (2009) who reveal that

soft drink consumption occurs in places where alcohol is consumed, such as parties and bars, highlighting that these are specific settings where soft drink can be found. However, their study does not extensively discuss the coexistence of soft drink consumption with other social practices. Another example is Block et al. (2013) who report interesting findings (section 1.7.1) but do not aim to examine the practices that are implicated with soft drink consumption. In summary, the literature does not shed much light on the idea that soft drink consumption is connected to other practices.

On the other hand, this study reveals that this practice usually does not happen alone, indeed, it is implicated with other social practices and coexists with, for example, the practices of studying, socialising and eating. The coexistence of soft drink consumption with other practices is evident on the material level as during my observations I found that cans of soft drink next to leftover food, bags, laptops and books. In addition, the interview participants identified the connections between soft drink consumption and other practices. These contexts and situations in which the soft drink consumption can be found are not highlighted in the literature, however, acknowledging them fully is essential. Therefore, the finding that soft drink consumption is linked to other practices is potentially valuable because it is in keeping with Shove et al. (2012), who suggest in their analyses of social practice theory that different social practices can be linked to form “bundles” or “complexities”. By using social practice theory as a lens for my research, I was able to see the link between soft drink consumption and other social practices and recognise that soft drink consumption is not a practice that occurs in isolation, which is how it is dealt with in the literature. Also, looking at soft drink consumption in this way, as a practice connected to other practices, reflects Nicolini’s (2012) assertion about the value of examining social practices by “zooming out”. In simple terms, the concept of “zooming out” argues that we need to understand the practices that influence the social practice under investigation to fully comprehend this practice.

Additionally, and because I have conducted a qualitative study, I have been able to go deeper into the details of my study topic. My findings not only outline the practices that coexist with soft drink consumption but go beyond this to offer a closer look at the particulars of soft drink consumption as a social practice. This study is unique in that it shows how soft drink consumption is not a practice that is accomplished by participants quickly (compared with other practices such as food consumption) but tends to take place and endure over a long time within people’s daily routines. I have suggested that when a practice takes a while to be performed by the consumer this means that this practice takes place across a wide spatial area. This is because

the performer starts the performance (soft drink consumption) in one setting but over time, naturally moves to another setting. These findings respond to the aims of my research.

7.4 Habitual consumption of soft drinks

My findings clarify that soft drinks are consumed out of habit as many participants indicated that consuming a soft drink is a normal thing for them to do when they eat their meals. However, my findings go further and also suggest an interesting environmental factor of soft drink consumption that helps to maintain the participants' soft drink habit. My findings show that participants will consume soft drinks only if the meal deal they buy offers one with it, otherwise they will not choose to have a soft drink.

This agrees with Warde's (2016) discussions in his book *The Practice of Eating* in particular in the chapter on habituation. Warde (2016) argues that, when it comes to eating habits, individuals are not completely self-aware and their level of reflection is very low, meaning their actions are not based only on reason and logic. Also, Warde (2016) suggests that one of the reasons people eat is because they are hungry, but he also claims that there are several environmental triggers that prompt individuals to eat such as when they see an advertisement or pass a patisserie. This aligns with the findings detailed above, as meals, in general, could be a trigger for soft drink consumption. Also, another qualitative study on soft drinks by Krukowski (2015) identifies the clear role of habit in the consumption of soft drinks. This study uses the theory of planned behaviour as its research framework and finds that habit plays a role in the soft drink consumption of the study participants. Therefore, my study agrees with Krukowski (2015) as I also find that habit plays a role in soft drink consumption. However, as previously stated, my study's findings go further and suggest that meal deals help to promote the consumption of soft drinks as the participants revealed that they will consume soft drinks if a meal deal offers them. Furthermore, in terms of data collection, my study used observation in addition to interviews, making it unique to other studies conducted in the domain of soft drink consumption. Moreover, my study employs social practice theory as a key research framework, a framework that has not been employed previously in soft drink consumption studies.

As part of reflexivity in this thesis, it is important to note that my position as a researcher and my background (see the introduction and sections 2.1) have influenced the data collection and data interpretation in this qualitative observational study. As stated in the introduction (before

the literature review) and section 2.1, I am a dentist and my primary supervisor is a sociologist. This positionality has led me to use sociological theories and thus the use of sociological theories has influenced my data collection process and the interpretation of the data. I will explain this in detail in the following paragraphs.

As I have used social practice theory in my thesis, I was influenced by the concept discussed by Shove et al. (2012) that practices can be connected. This concept was reflected in my data collection processes as during data collection, it enabled me to notice the practices that are associated with soft drink consumption. Additionally, because I was able to understand this concept and notice the practices associated with soft drink consumption during data collection this positionality has affected my interpretation of the data. This is evident in section 5.4 when I discuss the social practices that are associated with soft drink consumption such as socialising and studying.

Additionally, I was enlightened by Shove et al.'s (2012) discussion that meaning is an important component of understanding social practices. This insight has had an influence on my data collection as during data collection, I looked for the meanings of soft drink consumption and I was able to recognise them. As a consequence, this is reflected in my interpretation of the data when I discuss the meanings of soft drink consumption in section 5.2. and I show, for example, that soft drinks are consumed for many reasons, such as for cooling down when the weather is hot or to quench thirst. Additionally, the use of the word "meanings" in the heading of section 6.3 ("The function and meanings of meal deals in everyday life and the position of soft drinks within the meal deal context") is another example of how I have been influenced by the social practice theory concepts described by Shove et al. (2012)

Moreover, because I adopted social practice theory as a framework in this thesis, I was influenced by Shove et al.'s (2012) argument that materials are vital components in social practice theory. This has influenced data collection as during data collection, part of my focus was on materials and thus I was looking for all the materials relevant to meal deals including the mains (sandwiches for example), drinks and snacks. Additionally, this focus on materials definitely had an influence on the interpretation of the data. This influence is reflected in section 6.2, which includes tables that contain all the materials relevant to meal deals.

My reading in sociology is manifested in a further way in my thesis. In the materials and methods chapter (chapter 4), we can see how elements of my research stages align with some ideas related to social practice theory described by Nicolini (2012). For example, stage one of

data collection (section 4.2) is titled “Zooming in” because this stage aligns with the concept of “zooming in” proposed by Nicolini (2012, p. 219). In particular, at this stage of the data collection, I aimed to explore what participants said about soft drink consumption and the behaviours related to soft drink consumption. Thus, what I did at this stage follows Nicolini’s (2012) concept of “zooming in”. Also, stage two of this research is titled “Chasing the materials” (section 4.3). This stage also aligns with the concept of “zooming out” proposed by Nicolini (2012, p. 228). In particular, at this stage, I aimed to examine soft drinks in other contexts and settings especially within the context of meal deals. In this way, this stage follows Nicolini’s (2012) idea of “zooming out”.

Additionally, my reading on actor network theory has also influenced data collection in this study and thus the interpretation of the data. I was enlightened by the concept discussed by Mol and Law (1994) that materials vary according to the context. By understanding this, I was able, during data collection, to recognise that the meanings of soft drink consumption vary according to the context. Subsequently, this understanding had an influence on my interpretation of the data when I show, in section 5.2, that the meanings associated with soft drinks vary from context to context. For example, when individuals consume soft drinks before going to the gym (context 1), they are consumed for energy, while when individuals consume soft drinks with meals (context 2), they are consumed to enhance and add something to their meals so the overall taste of the meal is satisfying (section 5.2).

Furthermore, I was influenced by Mol and Law’s (1994) clarification that the notion of networks is unlike that of fluid spaces. Mol and Law (1994) point out that a network might be affected tragically if one actor within the network is removed. This is attributed to the fact that all actors in a network rely on each other (Mol and Law, 1994). Mol and Law (1994) indicate that this is not the case when it comes to fluid spaces as no component in a fluid space is essential. This idea has influenced me and thus is reflected in my interpretation of the data when I show in section 5.5 that adopting the concept of networks is unsuitable to conceptualise soft drinks and meals, as meals can be consumed “normally” without soft drinks. Therefore, the absence of soft drinks in meals is not influential.

Above is a detailed explanation of how my reading on sociology and the use of sociological theories has impacted my data collection and interpretation of the data. The next section highlights the phenomenon of meal deals as an element that influences soft drink consumption.

7.5 Role of the environment in soft drink consumption

In their qualitative study on soft drink consumption, Krukowski (2015) reveal interesting findings including that the home environment can influence soft drink consumption as the availability of soft drink can influence soft drink consumption. These are valuable findings but the discussion of them is brief and general. Also, Hattersley et al.'s (2009) research shows that environmental factors can play an important role in soft drink consumption and that the availability and advertising of soft drinks both influence consumption. Again, these are valuable findings, but they would be improved if the literature provided more discussion, details and explanation.

This social practice theory-based research demonstrates that our environment is not neutral but is “actively constructed” by agents. My unique findings provide a clear example of the role of the environment in influencing soft drink consumption. Specifically, they show that the phenomenon of meal deals plays an important role in influencing soft drink consumption. Details on how the meal deals influences soft drink consumption are provided in the paragraphs below (section 7.6 and 7.7).

7.6 Meal deal arrangements in shops and the position of soft drinks within this context

In my results chapters, I analysed in detail the construction and arrangement of meal deals that encourage the consumption of high-sugar soft drinks. I have shown how, if individuals want to buy meal deals and enjoy the low price for the combined items they offer, consumers have a limited choice of soft drinks. For example, some of the meal deals only offer two sugar-free soft drinks compared with four types of full-sugar soft drinks. In meal deals, there are always fewer sugar-free soft drinks available than full-sugar soft drinks.

In terms of the availability of bottled water, in the Students' Union Shop, I have shown that if individuals bring their own bottle, they can get free tap water, but I argue that it is unusual for individuals to roam around university with a water bottle. If a consumer takes the meal deal offer and wants a water and do not have a bottle, the only unflavoured water choice available is a sparkling water, which might not be what the consumer wants. I have also shown how soft drinks and snacks dominate the shop shelves compared with healthy items such as water and fruit, which are positioned to the side or occupy a very small area of the shelf. This might encourage soft drink consumption. The point here is that Black and Macinko (2008) suggest

that the factor of the environment, which incorporates, for example, the availability of food items, might play a role in the development of obesity. However, “environment” covers a range of different dimensions according to Ownshend and Lake (2009), who state that the concept of environment includes “physical”, “cultural” and “policy” elements.

In my observations, I noticed that full-sugar soft drinks (not artificially sweetened) are offered more often in large portion sizes with no small portion sizes available. In Greggs, Out of 16 full-sugar soft drinks, 14 were available in a 500 ml portion size and only 2 are available in small portion sizes, one of 330 ml and the other of 250 ml. I have mentioned previously that this imbalance might drive people to consume high quantities of soft drinks and thus high amounts of sugar. What is interesting is that sometimes in Greggs, within the meal deal offer, there is no cost difference between the large and small portions of soft drink. In addition, I noticed that the application of the sugar tax for sugary drinks is limited, inconsistent and not applied to most of the drinks.

Shove et al. (2012) assert that, for any social practice, the arrangements of the materials and the meanings behind the practice concerned play a substantial role in the course of the practice. According to this and from the perspective of social practice theory, this means that the materials and meanings associated with soft drink consumption are arranged to favour the consumption of soft drinks. Therefore, there might be a need to rearrange the relevant materials to reduce overall soft drink consumption. This agrees with Hattersley et al.’s (2009) suggestion that environmental triggers are to be considered among the elements that drive soft drink consumption. In addition, Warde (2016) discusses this point and highlights that every detail can affect the practice of food consumption, including food tools, tables and ovens. Warde (2016) goes on to mention the importance of infrastructure in influencing individuals’ food choices as this cannot be adjusted by consumers.

The above findings reveal how meal deals can influence soft drink consumption. Previously, I provided empirical examples of the determinants of soft drink consumption, in particular, when I show that meal deals play a big role in inducing soft drink consumption. However, here, my findings go beyond simply highlighting that meal deals encourage soft drink consumption to show qualitatively the way that the construction of meal deals and their arrangement in shops might drive the consumer to consume more soft drinks.

In their paper on the determinants and patterns of soft drink consumption in young adults, Hattersley et al. (2009) suggest that certain social determinants drive young people to consume

soft drink, mentioning bars and parties as examples of situations that may influence this consumption. This is an example of how researchers talk about soft drink consumption and how these are discussed as ‘determinants’ in the literature. Certainly, these are interesting and valuable findings, but my project differs from this approach in several key points. Most of the studies in this area collect data only through formal interviews while my research has collected data on soft drink consumption as a practice through formal and informal interviews and observation. Therefore, I have applied the concept of data triangulation to get a better picture of the soft drink consumption and its determinants from various angles. I was able to collect data in this way because of the flexible methodology of the observational study that I have adopted.

The second difference is that my project does not stop with identifying the places that might increase soft drink consumption, for example, by saying only the Students’ Union Shop and Greggs might drive consumption. Rather, I provide additional details by suggesting that this consumption is influenced by the phenomenon of meal deals. Moreover, I then explain qualitatively the details and the process of how the meal deals sold in shops encourage soft drink consumption by analysing the available portion sizes of the soft drink bottles, prices, taxes and the availability of full-sugar soft drinks compared with artificially sweetened soft drinks. Again, giving these details and explanations will clarify the phenomenon of soft drink consumption as a social practice. The tangible findings delivered here will help public health professionals to understand where and when to begin their soft-drink interventions. Public health professionals can start to look at how meal deals are constructed and arranged in shops, universities and other settings as my research suggests that meal deals are entangled with the phenomenon of soft drink consumption. In conclusion, here, I have discussed how my findings contribute to the available literature on soft drinks.

The section below will discuss another contribution that my research offers in relation to my results in section 6.3.

7.7 The function and the meanings of meal deals in everyday life and the position of soft drinks within the meal deal context

This thesis also explores the phenomenon of meal deals from the consumers’ point of view and highlights the function and the meanings of meal deals in everyday life and the position of soft drink within the context of the meal deal. I define “meal deal” as a set of three items including

a main product and two sides, usually a drink and a snack. In addition, my findings reveal several essential features of the meal deal phenomenon. One of them is that meal deals are inexpensive. The results and analyses point out that meal deal companies and suppliers use a marketing strategy called “mixed bundling” that typically aims to entice consumers to buy the meal deal by offering several items for a cheaper price than they cost separately.

Also, I highlight that the problem with some meal deal offers is that they may entice consumers to consume extra sugar in the form of soft drinks. Even when individuals do not typically consume soft drinks, a meal deal can tempt them to drink one. So, the existence of soft drinks as a convenient and easily accessible option within the meal deal offer makes meal deals a concern because of their ability to increase and mediate soft drink consumption. In addition, the data I have collected reveals that meal deals are available widely and are sold in different settings by different suppliers including shops, restaurants, university buildings and pharmacies. This omnipresence may logically increase the level of meal deal consumption and therefore the level of soft drink consumption as soft drinks are part and parcel of meal deals. My findings indicate that it is not only the wide availability of meal deals, their cheapness and their tempting nature that entice consumers to choose them over other meals. My results also suggest that consumers purchase meal deals for several reasons. For example, they save consumers effort and time compared with other meals such as restaurant and home-cooked meals.

When it comes to social practices, Nicolini (2012) highlights the importance of the materials and the body, too. Nicolini (2012, p.4) states that a social practice is a kind of repeated “bodily activities” that is enhanced and supported by the relevant materials. According to this explanation, we can assume that individuals might consume soft drinks because of the physical arrangement of meal deals, which might enable and encourage soft drink consumption. In addition, my findings reveal that because meal deals can save people time and effort, they are associated more with lunch because lunch is a busy and crowded time. I also point out that, in fact, meal deals are not only linked with lunch hours but any other times when individuals are stressed or running short of time, for example, when they are travelling, taking exams or busy with work.

The discussion of meal deals in the literature is extremely scarce. The findings I provide about meal deals is rich and unique as it talks in depth about the meanings and the functions of the meal deal phenomenon. The information I provide about meal deals including its definition, characteristics, meanings and functions and the solutions they offer form fundamental

knowledge in the domain of food and nutrition. This thorough knowledge about meal deals revealed by my results and analyses acts as a starting point to properly understanding and intervening in the phenomenon of soft drink consumption as a social practice. Undoubtedly, the reality of soft drinks is mediated and influenced by the phenomenon of meal deals and the proper structuring of meal deals would significantly contribute to the management of soft drink consumption. Meal deals act as a proximal determinant that can influence and encourage soft drink consumption.

As I mentioned previously (section 7.5 and 7.6), this study does not only talk about the role of the environment in influencing soft drink consumption in general but goes into specifics and gives an empirical example of these determinants, which is the meal deal. This study then goes on to explain in detail how meal deals can influence soft drink consumption. I was able to deliver these findings by designing a study according to a different paradigm. I noticed that most of the studies in this domain are quantitative in nature and therefore I decided to conduct a qualitative study to change the way we approach soft drinks and get new and valuable data to help us create better health interventions. There are few qualitative studies on soft drink consumption and the ones that do exist only collect data through interviews and focus groups unaccompanied by naturalistic observations.

Finally, using social theories to approach the phenomenon of meal deals and soft drink consumption is valuable. In particular, this research mainly adopts social practice theory as a framework and guiding theory for the research. This theory helps us to dive into the details of meal deals and soft drink consumption as it helps us look at the material, meaning and competence of these practices. Looking at these three elements (material meaning and competence) adds a lot to our understanding of the practice of meal deals and soft drink consumption.

7.8 Applying social practice theory to the domain of meal deals and soft drinks

This section will explain and discuss how social practice theory can help in understanding and contributing to research on soft drink consumption as a social practice. First, I will show how the phenomenon of meal deals is discussed in the public health literature and what frameworks or theories have been used to frame this topic. Then, I will show how social practice theory can provide solutions for and can significantly contribute to our understanding of the phenomenon of meal deals.

The National Health Service (National Health Service, 2019) website provides several pieces of advice and recommendations for individuals about healthy food choices. For example, they advise individuals in general to eat enough vegetables and fruit. In terms of sugar, they advise people that if they tend to consume high-sugar foods or drinks, they should reduce their consumption of these items (National Health Service, 2019).

This advice is valuable and it is important to raise awareness about good nutrition but several sources argue that advice alone has limited success in changing people's behaviours. The National Health Service's approach to changing behaviour through providing advice can be described as a "lifestyle" approach under the rational choice theory framework. These types of interventions target individual behaviours and usually take the form of awareness promotion and education about the adverse health consequences associated with behaviours such as smoking and excessive sugar consumption, with the underlying rationale that this education will enable the audience to replace these behaviours with better ones to improve their health and wellbeing (Daly et al., 2013). However, several aspects of this approach have been criticized for a variety of reasons.

The "lifestyle" approach has also been criticized because it doesn't seem to yield the desired results, it has limited effectiveness in improving health outcomes (Farquhar et al., 1990). The lifestyle approach has been criticized for its reliance on psychological theories that are inadequate to explain our actions (Sutton, 1998). Psychosocial theories claim that an increase in knowledge will lead to a better attitude, which, in turn, will lead to good behaviour (Vihalemm et al., 2015; Shove, 2010). In fact, attitudes emerge and develop as a consequence of our actions and behaviours, not as a predecessor to them (Bartiaux and Salmon, 2012). This claim was supported by Becker's empirical qualitative study that was discussed in his book, *Outsiders: Studies in the Sociology of Deviance* (1963). Becker (1963) documented that marijuana users developed their ways of feeling and thinking (attitude) during and throughout the course of using marijuana, not before. Most notably, Becker showed that at some point during the course of using marijuana, marijuana users started to view themselves as normal, rather than deviant (Becker, 1963).

Relevant to the discussion about the concept of choice and inequality, Throsby (2018) adopted a different perspective to criticize the conceptualization of health behaviours through the concept of choice. Throsby cited a story mentioned by Otto (2017), in which a woman lives in an area that receives extensive health-related campaigns. Nonetheless, she continues to fill her

baby's bottle with soft drinks to make him calm, because if the baby were to cry, the uncles would come to beat him. Throsby (2018) pointed out that the "choice" of a good behaviour- in this woman's case, reducing the baby's sugar consumption- differs from when more privileged people choose to reduce sugar consumption. In other words, in this woman's scenario, reducing or quitting sugar represents a kind of "coercion," but in when more privileged people choose to reduce or quit sugar, it is not "coercion", it is a "profitable" way, for them, to discover their own talents and potentials (Throsby, 2018).

Mol (2009), too, clearly criticized choice theory, highlighting that choices are easy to discuss in theoretical terms, but difficult to implement, in "practice," in our busy daily routines. Mol's ethnographic clinical observations recorded a story in which a doctor told a diabetic man that if he wanted to decrease the chance of later diabetes complications, he needed to carry a blood glucose monitoring device with him and take five measurements every day (Mol, 2009). This data would be helpful to control his diabetes tightly and thus avoid complications (Mol, 2009). Several weeks later, the man returned with no glucose recordings (Mol, 2009). He justified this "choice" to the nurse by explaining that in his work as a builder, there was no suitable place to take the measurements, especially since he did not want his friends to know about his disease and the toilets were far away (Mol, 2009). In other words, within his work routine (in practice), it was inconvenient to prick his finger, put the strip in the monitoring device, wait for the result, and record it (Mol, 2009). Therefore, he "chose" not to measure his glucose, apparently because he cared more about the challenges of measuring and monitoring glucose than about the potential for later complications (Mol, 2009).

In their paper "Upsizing Australia's Waistlines: the dangers of "meal deals"," Cameron-Smith et al. (2002) discuss the concept of the "upsizing strategy," which is applied in the sales practices for meal deals at restaurants and fast-food outlets, for example. "Upsizing" in this context refers to when restaurants offer an additional or larger item for a small additional amount of money (Cameron-Smith et al., 2002). For example, the addition of chips and a soft drink with a burger would enlarge and upsize the meal but costs only a small amount more than buying the burger on its own (Cameron-Smith et al., 2002). This is an approach that is designed to provide the consumer with the feeling that their purchase is good "value for money" and it is an important marketing strategy (Cameron-Smith et al., 2002)

The discussion of the phenomenon of meal deals and upsizing in this paper has been framed according to the concept of "environmental factors." This approach suggests that

environmental factors play an important role in changing food consumption practices and have resulted in the wide prevalence of obesity in modern society. In addition, this paper calls for an increase in public awareness of the phenomena of upsizing and meal deals to address the adverse effects of poor health and obesity.

In their research, Yoong et al. (2015) examine the environment of school canteens in primary schools in Australia and the availability of healthy food in these contexts. They also examine the pricing and promotions implemented in these canteens. This study reveals several key findings about the prevalence of healthy food on canteen menus and the prevalence of school canteens that do not offer unhealthy food. One important finding is that about 25% of Australian primary school canteens incorporate healthy food into their meal deal offers.

When Yoong et al. (2015) suggest ways to improve the diets of children and address unhealthy meal deals in primary school canteens, they talk about the need to create a supportive environment in which healthy food choices are enhanced. Without this more positive food environment, the capacity for canteens to effect positive change in primary students' nutrition will be limited. In addition, the authors identify several obstacles to applying a policy that supports a healthy canteen food environment, such as cost, time, skills, and knowledge. They also suggest there is a need to discuss this with all stakeholders to overcome these obstacles and achieve a better food environment.

The framework Yoong et al. (2015) adopt when they discuss the solutions to the problem of unhealthy food in Australian primary school canteens is the same as the framework applied in the previous paper, written by Cameron-Smith et al. (2002), to discuss the problem of food consumption, including meal deals. However, there are two common criticisms aimed at this framework.

In both papers, the problem of food consumption and meal deals is framed in terms of environmental factors and it is argued that there is an urgent need for what is called a "supportive environment," without which change to achieve better food options will be difficult. However, Yoong et al. (2015) provide a more detailed discussion of this issue and identify some of the barriers to change and to achieving healthier purchases and therefore better health outcomes.

Framing the problem in terms of environment is a valuable but slightly confusing approach as the word "environment" can incorporate an unlimited range of factors, for example, pricing

knowledge, skills structure, culture, economics, and awareness, which can make interventions difficult, unclear, or even impossible. If we can identify the key environmental problems, the interventions required would be clear, tangible, and achievable. However, if we cannot figure out the root of the problem, then this vagueness will make identifying an appropriate intervention difficult and may result in unsustainable positive outcomes.

This sort of criticism follows what Shove (2010) described. Shove (2010) criticizes the way that policy documents frame problems of consumption and how to generate positive environmental behaviours. Shove (2010) criticizes these documents for suggesting that individuals' performance of positive environmental behaviours is dependent on different factors that act as motivators or barriers for individual actions. However, Shove (2010) claims that these factors are huge in number and unclear and they can sometimes act as barriers and at other times act as motivators. Shove (2010) identifies some of these factors, such as incentives, advertising, regulations, and costs.

Moreover, in the discussion section in the Yoong et al. (2015) paper, the authors state that it is important to pay attention to food advertising as it can impact children's food consumption decisions. This way of conceptualizing and framing the problem represents the individualized approach focusing on the concept of choice, and the lifestyle approach is also present. In other words, advertising will influence individuals and the choices they make. This approach is subject to several criticisms, which have been mentioned in earlier paragraphs.

Another and final example from the literature is the 2016 study by Ellis and Bhakta. In their study, Ellis and Bhakta (2016) explore whether meal deals (which in their study are considered to consist of a main meal, snack, and drink) that are sold in supermarkets in the UK during lunch hour, can lead, or not, to an increase in people's intake of unhealthy ingredients such as salt, sugar, and saturated fat and to their energy intake overall. Their results reveal that consumers who only options were meal deals consumed much more energy and salt when compared with consumers who were not offered a meal deal option. Additionally, the normal, or "habitual" lunch of people did not have the option of a meal deal consisted of less sugar, salt, energy, and saturated fat in comparison with consumers consumed meal deals (Ellis and Bhakta, 2016).

Ellis and Bhakta's (2016) discussion of meal deals is similar to that found in the other papers reviewed and these authors again emphasize the need to create a supportive surrounding environment to improve people's food choices and direct them toward healthy options. In

particular, they suggest that interventions should be directed at retailers and the change should start with. Specifically, they should be obliged to offer customers healthy options. They argue that retailers can do this and can make healthy food convenience food by ensuring it is easy to access. Additionally, retailers are advised to focus their marketing on healthy foods. From Ellis and Bhakta's (2016) discussion, we can see that the solutions they provide for overcoming the negative consequences of meal deals concern consumers making better choices, and thus there is still a focus on the individual as an active actor in the field. However, Delormier et al. (2009) assert that focusing on the individual in the domain of food and the habits associated with it, will achieve only a limited amount of success. In their work, Delormier et al. (2009) explain what it means to conceptualize eating as a behaviour in contrast to conceptualizing it as a social practice. Vihalemm et al. (2015) and Shove et al. (2012) also criticize the individualized approach and explained a new theory and approach to achieve social change called social practice theory. It is this theory that has been applied in the results section of the present research.

The approach I have adopted is to apply social practice theory to contribute to our understanding of the phenomenon of soft drinks consumption and meal deals. This approach has been explained by several authors, including Shove et al. (2012) and Vihalemm et al. (2015), who argue that its application can lead to positive social change. Moreover, my approach differs from the existing literature in terms of how meal deals and soft drink consumption are conceptualized and framed. For example, the National Health Service (2019) website advises people to reduce the sugar consumption. This assumes that individuals have this choice and the NHS is thus presuming that if people are informed, their behaviour will change. However, this approach has been criticized, as mentioned above, and it is not the position adopted in this work. The second approach that is mentioned in the literature, for example by Ellis and Bhakta (2016), argues for the need to create a supportive environment to help individuals make healthier food choices. Here, there is again a focus on the concept of the structure. The present research does not adopt this approach.

The approach applied in this work is to focus on the practice and activity itself and the action of soft drink and meal deal consumption as they occur in everyday life. In other words, this study focuses on the phenomenon of soft drink consumption as an action and activity that occurs in everyday life and as something that exists in the medium between the individual and social structure. According to Vihalemm et al. (2015), social practice theory does not ignore the rational individual who can make decisions, but it considers the role of the surrounding

materials in which a practice or behaviour takes place. Thus, in the context of meal deals, this theory acknowledges and considers the materials surrounding the practice of purchasing meal deals, including the sandwiches, soft drinks and chips on offer, and also considers the meanings behind these materials, such as the feeling it can provide a consumer that they have purchased a meal that is good value for money.

Applying social practice theory to conceptualize meal deals, in which soft drinks are materials embedded in this context, can contribute positively to our understanding of this phenomena. For example, the phenomenon of meal deals in the UK in certain areas in malls, restaurants, or universities occurs because of the connection and integration of three elements. For example, meal deals available at university A exist because of the integration of material A, competence A, and meaning A. To illustrate further, in a shopping centre food area, meal deals exist due to the integration of the same elements with different features, for example due to the integration of material B, competence B and meaning B. Social practice theory emphasizes certain basic elements but is flexible and changeable according to the context in which these elements appear. This will ultimately help the analysis of this phenomenon and will lead to the identification of appropriate interventions for meal deals.

In other words, social practice theory can clearly explain the spread of the phenomenon of meal deals in the Students' Union. It can show how the practice of consuming meal deals has become normal over time not because of individual thinking and attitudes but due to the integration of several elements, including materials and technology. Therefore, interventions that aim to change any practice should focus on generating a new normality and configuration by acknowledging the role of all elements, including meanings and the sociomaterial network (Shove et al., 2012; Vihalemm et al., 2015).

These materials, including sandwiches, soft drinks and snacks, are placed beside each other in the Students' Union Shop in a way that is very accessible and convenient. Moreover, these sandwiches, soft drinks, and snacks are ready to be consumed on the go. All these elements, along with the meanings behind buying a meal deal, such as customers feeling they have purchased a meal that is good value for money, explain why the practice of consuming meal deals can survive and how the students there can be attracted to perform it as it fits well with their other practices. For example, buying a meal deal that can be consumed on the go completely fits with their studying practices as it saves time and does not interrupt their study. Conceptualizing the practice of meal deals in this way allows us to understand how and why it

has become normalized. Thus, interventions aimed to change this practice should not only be directed at changing people's behaviour but the whole normality practiced in the Students' Union, including meanings, materials, and competence.

Controlling the phenomenon of meal deals means reducing the burden of many diseases related to general and oral health, such as obesity, diabetes, and dental caries. There is an urgent need to reconfigure meal deals in different ways to make them a healthy practice. First, the material components of this practice should be changed to be healthier. Arranging bottles of water on shop shelves in the same way as the soft drinks which are currently abundant would help to change the practice of meal deal normality. Planting new meanings in students' minds would also help, for example, they should think about the fact that it is healthy to buy water as keeping hydrated is good for your health. More importantly, it is necessary to break the meaning currently attached to meal deals, that is, of sandwiches with soft drinks instead of water.

7.9 Function and the meanings of meal deals and social practice theory

In this section, I will use social practice theory as a way to make sense of the findings. The participants explained that they tend to consume meal deals over other kinds of meals, such as restaurant and home-cooked meals, in certain situations, for example, when they are running short on time or they do not want to make the effort to visit a restaurant or cook. My findings explain why people choose meal deals, but I will mention these reasons again here from the perspective of social practice theory. Companies and suppliers of meal deals modify the "material" element of meal deals in a way that has consequences for the practice of meal deal consumption overall and makes it the preferred choice for consumers over other meals. The modifications of the material include making the meal deal items available everywhere in shops, restaurants, Pharmacies and university libraries. Second, they include arranging the meal deal items in shops in a way that makes it easy for customers to grab them without much thought. For example, they place all the meal deal in one aisle beside each other. Third, they include offering certain items for meal deals such as a sandwich or anything that can be eaten on the go.

The modifications made by meal deal companies and suppliers on the material level influence the second element of the meal deal consumption practice, which is "competence", as the consumer does not need to shop for several ingredients and cook to enjoy a meal. As I have explained above, the materials for meal deals are prepared by meal deal companies to be ready

for immediate consumption. This creates a new meaning for meal deals which is as a time and effort-saving practice. No preparation is required with meal deals while the opposite is true with home-cooked meals, which require a significant degree of competence to collect and arrange the materials to create a meal. For example, in terms of home-cooked meals, individuals are expected to go to the shops to buy each separate ingredient for their meal, which will not all be in the same aisle or even in the same shop. In addition, they then need to cook the meal.

7.10 Limitations of the study

In my research, I conducted purposeful sampling. Therefore, as my study participants, I selected a certain group of people who are students in Sheffield and who can provide me with information that addresses my research aim. Although my selection was rational (section 4.2.2), it would be valuable if another population, in addition to the students, were studied as the information that could be gathered from them will add to and thus benefit the study of soft drink consumption and meal deals. Exploring more than one group in this study was not possible because of the timeframe of this PhD.

The same can be said for the shops where I observed meal deals, including the Students' Union shop and Greggs. My choice of these shops was logical (section 4.3.1) and allows us to better understand meal deals. However, this research was not able to cover more settings that offer meal deals because of the COVID-19 lockdown. Therefore, selecting other settings that offer meal deals will certainly offer new insights that will add to our understanding of meal deals in general.

I also aimed to conduct online interviews with shop managers about meal deals but unfortunately, I was unable to. I contacted eight shop managers and introduced them to my study and asked them to participate in online interviews. While they agreed initially, after I followed up by email, I received no response from them. This may have been because of COVID-19-related difficulties.

Anderson (2010) argues that one of the limitations of qualitative research is that it is difficult and extremely time-consuming to present qualitative findings visually. This research offers many findings as it is a large thesis, and thus it was not possible to present these findings visually and they are thus presented as a narrative only.

Mehra (2002) argues that one of the most well-known biases in qualitative research is researcher bias or subjectivity. As my research is qualitative, I cannot eradicate all subjectivity because my “position” has influenced the research process. Positionality refers to the position the researcher takes regarding the research process and the perspective of the researcher in terms of the study itself or its social context (Savin-Baden and Howell-Major, 2013). Braun and Clarke (2013) argue that researchers find it difficult to put their backgrounds and cultures aside and thus the data they collect is influenced by their background. Therefore, my position within this research, my background and experience has, to some degree, influenced the research process in this study and is a limitation of this research. In the following, I will show how my positionality has resulted in researcher bias and has, to some extent, “limited” the research process.

My role as a public health professional has influenced the direction of this research. In other words, as a public health professional, I am interested in understanding why people consume soft drinks. These interests have driven me to take a specific direction in my research and explore the phenomenon of soft drink consumption in everyday life. Another important factor that has influenced the direction of this study is that my primary supervisor is a sociologist and suggested that I read some books on social theory. Reading these books influenced this research. In particular, these texts prompted me to choose social practice theory as the framework for this research and thus the research adopted a sociological perspective. If during my PhD studies, I had read other books, I would have ended up understating soft drink consumption from another perspective.

Additionally, one of the examples that my position as a researcher has influenced and “limited” the direction of the study is reflected in my understanding of soft drink consumption, which has developed over the study. When I wrote the literature review, my understanding of soft drink consumption was limited to the idea that it is socially determined. I believed this because, at the time, my understanding of sociology was restricted to the concept of social determinants. I was thus trying to understand soft drink consumption from this perspective only. This is reflected in my literature review when I write about the concept of the social determinants of health in section 1.5.6.

However, after I adopted social practice theory as the theoretical framework for my thesis and after completing the results and analysis parts of this study, my understanding of soft drink consumption developed. This is reflected in my discussion chapter (chapter 7), which presents

the more advanced understanding of soft drink consumption I had gained by the end of this study. To illustrate this point further, when I was writing the literature review, I lacked a sufficient understanding of why people consume soft drinks and thus my comprehension of soft drink consumption was limited. This limitation is reflected in the literature review summary when I suggest that there is a gap in the knowledge regarding why individuals consume high levels of soft drinks. However, after applying social practice theory and conducting observations and analyses, I realised that the meal deals sold in shops can influence soft drink consumption. Thus, my understanding of why people consume soft drinks started to evolve because I started to develop a better understanding of some of the drivers of this consumption. In particular, I started to understand that how meal deals are arranged and constructed in shops can influence soft drink consumption.

A further example of researcher bias involves the qualitative interviews and the questions they include. For example, the questions concerned why people consume soft drinks and therefore we expect the answers will focus on the reasons for soft drink consumption. Other questions could result in the research taking another direction. According to Atkinson and Pugsley (2005), to reduce the level of subjectivity in qualitative research, they advise that researchers be reflexive about how their presence might direct the research and research process. Moreover, as a qualitative researcher, I also displayed 'observer bias' during my observations. As an observer, I was looking at soft drinks and meal deals only, and this thus limits my data collection to aspects of soft drinks and meal deals only. In simple terms, my focus during the observations in the field was on full-sugar soft drinks and how meal deals facilitate the consumption of soft drinks. My observations did not focus on salt and calories, for example.

Another way I showed 'observer bias' in my research is that, at the beginning of my observations, I was looking at soft drink consumption in a very 'limited' way. In particular, my perspective on soft drink consumption was limited because I had no idea what might drive individuals to consume soft drinks. Therefore, the focus of my observations was only on soft drinks. However, over the course of the study, my perspective on soft drink consumption changed and after spending a long time conducting observations I noticed that there are a lot of potential drivers of soft drink consumption. In simple terms, I realised that meal deals in shops could encourage consumption of soft drinks. This realisation changed my perspective on soft drink consumption and my observations changed accordingly. I started to observe more widely by looking at meal deals in shops and how they can drive people to consume soft drinks.

Another point relevant to observer bias in my research is that my observations were limited to the two shops that I collected data from. Therefore, the findings reflect only what has been observed in these shops. Gathering data from other shops and different settings would enhance and add to our understanding of soft drinks and meal deals as meal deal arrangements and constructions vary from one shop to another. The same is true when it comes to soft drink consumption. My research is limited to a population that consumes soft drinks in a certain way. Observing other populations might provide other findings.

Atkinson and Pugsley (2005) discuss some of the criticism around ethnography. In particular, they explain that the study participants, when they are observed, may change the way they act, and thus observational data will not reflect their usual behaviours (Atkinson and Pugsley, 2005). The authors suggest that researchers can avoid this if they spend enough time on data collection as this will help them to capture the normal, routine behaviours of the participants (Atkinson and Pugsley, 2005).

In my research, I minimised the potential for participant bias in two chief ways. First, as I spent a lot of time observing participants who consume soft drinks, I was able to capture the daily routine of this consumption. Second, I observed huge numbers of participants and thus I would not expect changes in the behaviours related to soft drink consumption. In simple terms, participant bias is less likely in my research because I spent sufficient time in the field and observed large numbers of participants.

7.11 Summary

This chapter discusses the contributions of this study and compares them with those of the existing literature. This chapter shows how this study reveals new meanings associated with soft drink consumption and emphasises that soft drinks consumption is not a practice that happens in isolation but with other social practices, an idea that has not been explicitly discussed in the literature before. Additionally, this chapter discusses an important contribution of this thesis, which is the identification of a link between meal deals and soft drinks and the finding that the arrangement of meal deals in shops can influence soft drink consumption. The next chapter concerns the conclusions of this qualitative study and its implications.

Chapter 8: Conclusion, implications and recommendations

8.1 Conclusion

In conclusion treating soft drink consumption as a social practice reveals how the meaning of soft drink consumption changes according to the context within which this practice exists *in relation to other practices*. Soft drink consumption is not a social practice that exists in isolation from other practices but rather coexists with other social practices such as eating, studying, exercising and socialising. Therefore, the contexts in which soft drinks are found is essential for public health interventions. Environmental factors can influence soft drink consumption as illustrated by the phenomenon of meal deals, which are closely linked to soft drinks and thus can influence the soft drink consumption. The construction and arrangement of meal deals in shops and on shop shelves can encourage and influence soft drink consumption. Thus, managing and reconfiguring the structure of meal deals can directly inform the soft drink consumption.

The function and the meanings of meal deals emerge as an important theme as soft drinks are firmly positioned within the meal deal context. Fully realising the solutions that meal deals offer individuals and the meanings that meal deals have will impact the soft drink consumption, particularly when it is known that these functions and meanings can drive individuals to decide to consume soft drinks.

8.2 Implications

This section discusses the implications of this research and how it could practically benefit different domains such as general and dental public health studies. Additionally, it will highlight how this study can inform future research.

8.2.1 Implications for public health

This research revealed that the meanings associated with soft drinks vary according to the context. Understanding this concept of multiple meanings is vital as it can help public health professionals to create better health interventions. In particular, understanding that soft drinks are not consumed only because of their taste and that people sometimes consume soft drinks when they want energy is important for public health practice. So, this research will be helpful to finding healthy alternative drinks that not only taste good but can also provide consumers with energy. This study also reveals that soft drink consumption is linked with other social practices such as eating meals, studying and socialising. This idea can positively impact public

health as knowing that there are several practices or contexts in which soft drinks can be found can help public health professionals to design appropriate health interventions.

One of the most important findings of this study concerns the availability of soft drinks. Consequently, it would be valuable to public health for shops and suppliers to limit the availability of unhealthy drinks and increase the availability of healthy ones. Strategies and techniques for reducing soft drink and sugar consumption are discussed in section 1.6. However, I will briefly discuss them here as they are relevant to the current section. Lobstein (2014) suggests that one of the ways to reduce soft drink consumption is to put water bottles in school vending machines rather than soft drinks.

Public Health England (2015) has proposed several interventions to reduce general sugar consumption including 1) controlling the advertising shown on different media, which can encourage individuals to consume more sugar, 2) rethinking price promotions as selling high-sugar items at a lower price can encourage people to consume more of them, and 3) reducing the sugar content of soft drinks (Public Health England, 2015).

Additionally, this study highlights the role of meal deals in promoting soft drink consumption. Therefore, controlling the sale of meal deals in general is vital to managing soft drink consumption. This could be achieved by reconfiguring the construction and arrangement of meal deals in shops as their arrangement can encourage people to consume more soft drinks. Controlling the construction and arrangement of meal deals not only in shops but also in any other setting such as universities, pharmacies and restaurants by changing the components they include to drive people to consume more healthy foods. More details of how we could reconfigure the construction and arrangement of meal deals in shops to reduce soft drink consumption are found in section 8.3.

Considering these implications, this research has the potential to benefit public health. As discussed earlier in section 1.4, excessive sugar consumption is associated with health conditions such as obesity and diabetes. Thus, controlling the components of meal deals and the availability of soft drinks will be valuable for general public health.

8.2.2 Implications for dental public health

By managing and reconfiguring the construction of meal deals using the strategy explained in section 8.3, we expect that the level of soft drink consumption will be reduced and thus sugar

consumption will also be reduced. However, it is difficult to conclude that this will reduce dental caries at the population level and thus it is difficult to suggest that this study could positively impact public dental health. More studies and data are still needed to reach such a conclusion. Quantitative studies might be helpful here to examine, for example, the level of sugar in meal deals and to see if there is an association between meal deal consumption and dental caries. By helping us to better understand the link between meal deals and dental caries, these kinds of studies and data could be useful for the field of public dental health.

8.3 Specific recommendations for policy

The most important recommendation arising from this project is to restructure and reconfigure meal deal arrangements and construction so they do not increase or influence the soft drink consumption. This can be achieved in the following ways:

- Suppliers and companies should look carefully at the arrangements of meal deal components on shop shelves and balance the healthy and unhealthy items. According to this project, it is recommended that water and other healthy items be given the dominant position on shelves compared with full-sugar soft drinks and other unhealthy items.
- Place healthy meal deal items such as water and fruit should at the front of the shelves so customers can grab them more easily.
- Increase the availability of artificially sweetened soft drinks and offer wider options, i.e. more than the only two or three options now offered.
- Readjust the soft drink portion sizes so that the full-sugar soft drinks are only available in smaller sizes compared with the artificially sweetened beverages.
- Tax should be applied more rigorously so it can be effective in reducing soft drink consumption. This could be done by increasing the tax on full-sugar soft drinks.
- Look for healthy drink substitutions that can satisfy consumers. These drinks should have natural ingredients and be low-calorie options.

8.4 Future research

This study offers insights into meal deals and their definitions, availability, prices and functions and meanings in everyday life. Most importantly, this study reveals the influence of meal deals on soft drink consumption. However, it is worth mentioning that this study explores meal deals

at two main sites. Further research is needed to widen our understanding of this phenomenon. Specifically, this could be achieved by conducting more qualitative research on meal deals at other sites in other cities and countries. Additional results will provide a better understanding of meal deals and their effect on soft drink consumption.

Further research is also needed to explore soft drink consumption and meal deals among other populations, that is, among people other than students and young adults. For example, one study in this area could explore the phenomenon of soft drink consumption among the elderly and see what the meanings associated with soft drinks are among this new population. Similarly, it could be investigated whether meal deals can drive the elderly to consume soft drinks. A comparison can then be made between these studies and this study to enhance our understanding of this field.

More research is needed to examine the level of sugar in meal deals and to see how much sugar is in each component of the meal deal, for example, in the drinks, sandwiches and snacks. Also, more studies are needed to measure the daily sugar consumption that comes from meal deals and compare this with the daily consumption of sugar from other sources.

Also, this study focused on the influence of meal deals on soft drink consumption and found that the arrangement of meal deals drives people to consume more soft drinks. It would be worthwhile for other studies to examine and explore the role of meal deals and see if they play a role in promoting other things such as the consumption of salt and calories, for example. Finally, this research reveals that soft drink consumption is linked with other social practices such as eating meals, studying and socialising. Then, this study narrowed its focus to reveal more about the link between soft drinks and meal deals. It would be interesting if other research was to explore more about soft drink consumption in the context of socialising and studying.

8.5 Conclusion

This chapter starts by presenting the conclusion of this study. Then, the chapter goes to discuss the implications of this research for public health and dental public health. Finally, the chapter ends by identifying some of the further research and studies that are needed to broaden our understanding of soft drinks and meal deals.

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Appendices

Appendix 1. Participant information sheet

Participant Information Sheet

Overview

We are pleased to invite you to participate in this study. Please make sure that you read and understand all relevant information before proceeding. If there are some points that are not clear, you can ask for further explanations and details from the research team. Additionally, if you like, you can also discuss this with others and consider their opinions. Please take your time in deciding if you want to take part or not.

Title of the study:

Social and individual factors that can influence soft drink consumption

Summary of this study

High levels of soft drink consumption have been identified as the main reason for high levels of sugar intake in adults and this can have an impact on general and oral health. There is a need to better understand what shapes soft drink consumption. The aim of this study is better to understand what shapes soft drink consumption.

Why has this location been chosen for this study?

This location has been chosen as a site to study because many people consume and buy soft drinks in this area. Additionally, this location offers meal deals which may include soft drinks. I am looking at the circumstances and reasons for consumption as well as the timing and location of activities being undertaken at the same time as soft drink consumption.

Should I participate or not?

It is really up to you whether you want to participate or not. You have to decide as it is totally voluntary and there is no pressure. If you have decided to participate, then you need to sign the consent form. Even after signing the consent form, you can quit participating at any time and no reason for this is required.

What will happen if you participate and what kind of information will be taken from the participant?

If you participate, you will be asked to complete a formal interview. We will agree a place for this interview that is comfortable for both of us. The interview will last between 20 and 75 minutes. I will ask simple and short questions and provide the opportunity for you to talk about your own perspectives on soft drinks. It is important for you to recognize that there are no

wrong or right answers to the interview questions. All the information you provide during the interviews will be audio recorded and subsequently included in a research paper.

What will the researcher do with recordings and notes?

All data including transcripts will be archived securely in the University of Sheffield's data repository where they will be preserved for a period of seven years before being deleted permanently. During this time the research team may access the data for training and research purposes only. Only members of the team will have access to the data.

What are the possible risks or disadvantages of taking part in this research?

No harm or risk is expected we simply want to have your own perspective about soft drinks and meal deals. You can withdraw at any time before data analysis and all data recorded will be deleted.

What are the possible benefits of taking part in this study?

You will get no direct benefit. However, you will be helping inform research that has never been conducted before. This research will be used to better inform existing research on soft drink consumption.

What if something goes wrong?

You can directly contact the researcher via phone or email. See below for details.

Will participation in this research be confidential?

All data that is gathered via observation or interviews will be anonymised and no one will be given access to these data apart from the researcher and research team. It is important to understand that I will be collecting only information related to the context and use of meal deals and soft drinks. Nothing else will be observed or noted. All data will be anonymised, meaning I will substitute new names and change personal details such as sex and age to make sure you cannot be identified.

Why is the information taken from participants important?

This information will be used to help us better understand the context and background behind soft drink consumption. There is actually very little work on this and it is becoming increasingly important.

Who are the research funders and organizers for this study?

This study is funded by the Saudi Arabian Cultural Commission and organized by the School of Clinical Dentistry at Sheffield University.

Who provided the ethical approval for this study?

This study was ethically approved by the University Research Ethics Committee at Sheffield University.

Who should I contact and how?

The lead researcher's name: Mohammed Sarhan

Email address: mmsarhan1@sheffield.ac.uk

Contact number: 07481288396

The first supervisor's name: Professor Barry Gibson

Email address: b.j.gibson@sheffield.ac.uk

Contact number: 0114 2159322

The second supervisor's name: Dr Alison Patrick

Email address: a.c.patrick@sheffield.ac.uk

Contact number: 0114 2159320

Appendix 2. Consent form

Participant consent form

Title of Project: Social and individual factors that can influence soft drink consumption

Name of Researcher: **Mohammed Sarhan**

<i>Please tick the appropriate boxes</i>	Yes	No
Taking Part in the Project		
I have read and understood the project information sheet dated 02/04/2020 or the project has been fully explained to me. (If you will answer No to this question please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)	<input type="checkbox"/>	<input type="checkbox"/>
I have been given the opportunity to ask questions about the project.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to take part in the project. I understand that taking part in the project will include formal interviews. Interviews will be audio recorded.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that my taking part is voluntary and that I can withdraw from the study at any time but before the analysis has been taken; I do not have to give any reasons for why I no longer want to take part and there will be no adverse consequences if I choose to withdraw.	<input type="checkbox"/>	<input type="checkbox"/>
How my information will be used during and after the project		
I understand my personal details such as name, phone number, address and email address etc. will not be revealed to people outside the project.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs unless I specifically request this.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that other authorised researchers may use my data in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>
So that the information you provide can be used legally by the researchers		
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.	<input type="checkbox"/>	<input type="checkbox"/>

Name of participant

Signature

Date

Age

Name of Researcher

Signature

Date

Appendix 3. Ethical approval

Ethical approval



Downloaded: 26/08/2020
Approved: 01/10/2018

Mohammed Sarhan
Registration number: 160263318
School of Clinical Dentistry
Programme: PhD Dentistry (science)

Dear Mohammed

PROJECT TITLE: The cultural, social and individual influences associated with soft drink consumption: and ethnographic and phenomenological qualitative research study.

APPLICATION: Reference Number 018709

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 01/10/2018 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 018709 (form submission date: 26/09/2018); (expected project end date: 01/03/2020).
- Participant information sheet 1050902 version 1 (16/08/2018).
- Participant information sheet 1050901 version 1 (16/08/2018).
- Participant information sheet 1050900 version 1 (16/08/2018).
- Participant information sheet 1042269 version 2 (03/06/2018).
- Participant information sheet 1049322 version 2 (08/07/2018).
- Participant information sheet 1049290 version 2 (07/07/2018).
- Participant consent form 1050903 version 1 (16/08/2018).
- Participant consent form 1042266 version 1 (05/04/2018).
- Participant consent form 1049323 version 2 (08/07/2018).
- Participant consent form 1050905 version 1 (16/08/2018).
- Participant consent form 1050904 version 1 (16/08/2018).

If during the course of the project you need to [deviate significantly from the above-approved documentation](#) please inform me since written approval will be required.

Your responsibilities in delivering this research project are set out at the end of this letter.

Yours sincerely

Janine Owens
Ethics Administrator
School of Clinical Dentistry

Please note the following responsibilities of the researcher in delivering the research project:

- The project must abide by the University's Research Ethics Policy: <https://www.sheffield.ac.uk/rs/ethicsandintegrity/ethicspolicy/approval-procedure>
- The project must abide by the University's Good Research & Innovation Practices Policy: https://www.sheffield.ac.uk/polopoly_fs/1.6710661/file/GRIPPolicy.pdf
- The researcher must inform their supervisor (in the case of a student) or Ethics Administrator (in the case of a member of staff) of any significant changes to the project or the approved documentation.
- The researcher must comply with the requirements of the law and relevant guidelines relating to security and confidentiality of personal data.
- The researcher is responsible for effectively managing the data collected both during and after the end of the project in line with best practice, and any relevant legislative, regulatory or contractual requirements.

Appendix 4. Topic guide for stage one data collection

Topic guide (1)

Can you please tell me what are you doing here at the Students' Union?

Can you please tell me why you are consuming a soft drink right now?

In what situations and conditions do you usually consume soft drinks and why?

Appendix 5. Topic guide for stage three data collection

Topic guide (2)

Can you take me through your normal day please?

What kinds of food or meals do you eat usually, and where? Can you take me through a few of these?

Can you please list all meals?

What do you think makes a meal deal a meal? Why do you choose meal deals over other kinds of food choices and meals?

What do you think distinguishes meal deals from other kinds of meals? Why go for one meal over another?

Can you give me a list of all the meals deals you know about?

How do all of these meal deals differ from each other?

What does it mean to have a meal deal?

How do the meal deals help you with your daily life?

When you decide not to go for a meal deal what reasons usually inform your decision?

Do you find anything about meal deals that can make them frustrating?

Which meal deals do you prefer, and why?

What would you normally select to have in your meal deal? Why?

What mains do you usually go for? Why?

Drinks – which kinds of drinks do you like to have? Why?

Do you go for a soft drink option within the meal deal? If so why? When would you do this?

What other option might you have?

Do you try water with the meal deal? If not why not?

What side or snack do you like? Why?

Appendix 6. Fields notes for soft drinks and meal deals

Field notes for soft drinks (sample 1)

Area 1

15/10/2018, 1:20 pm

It is the afternoon and this area is crowded with actors. Most of them set at the tables to have their lunch. Some actors go and other actors come in continuous motion. Their voices are too high, and it is noisy. Some actors are in a queue. They are waiting for their turn to choose their food from the restaurant. Others are in a queue to pay for what they have chosen. I also see many actors (2) with a cart loaded with soft drinks, taking soft drinks from this cart and putting them into the refrigerators located in front of the telling machine. Usually, when actors choose their meal, they go to this refrigerator and take the soft drink they want.

Usually between 1:45 and 2:00 pm, most of the actors in the groups get up from their tables and leave the space.

18/10/2018, 1:30 pm

At this point in time, the phenomenon of soft drink consumption becomes clear. Actors drink and sit with their bags beside them. The practice of soft drink consumption happens together with lunch and interaction. I see that the refrigerators are available and full of soft drinks.

19/10/2018, 10:07

There are very few actors at this time. Soft drinks are not available on the tables as they were yesterday at 1:30 pm. The restaurant is closed, it has not yet opened. I can sometimes see actors with soft drinks (even though the restaurant is closed). They sit with friends, open laptops and consume soft drinks with sandwiches.

23/10/2018, 10:50 am

The restaurant is still closed, but I can see some actors consuming soft drinks with food that they may have brought from other areas.

26/10/2018 1:15 pm

Soft drinks are again clear at this time. I see cans on the tables between the food, notebooks and laptops. The actors are in continuous interaction, and it is crowded and noisy. I saw five

cans of soft drink have already been consumed and have been thrown on the middle of the table, beside plates of pizza.

26/10/2018 1:50 pm

At this time, actors usually leave this space in groups, while they leave the food on the tables. But in terms of soft drinks, some actors take their soft drinks with them. Others leave them on the tables and others take them but throw them in the trash before they leave.

29/10/2018 1:50 pm

today I saw some actors entering this space (where have they been before??) with their sandwiches and soft drinks already with them (not from the restaurant). They join their friends in this area, although there are a lot of spaces they could chose from to sit outside this area.

Area (2)

18/10/2018 1:30 pm

Although this tends to be a study area or an open area, I can see soft drinks here as well as remnants of the actors' lunches. There are also many vending machines here.

19/10/2018 10:25 am

Here, actors are more likely to study. The interactions are not frequent; some actors consume soft drinks in very slow patterns. They do study, and they are busy.

24/10/2018, 10:50 am

Here there is no crowding. It is calm. One of the scenarios that I see here is actors sitting at a table, not talking to each other, each holding a mobile and busying themselves with it. They consume soft drinks very slowly, then they stand up very quickly with a soft drink in their hand and rush to leave the space.

2/11/2018, 12:30 pm

I saw many actors sitting, they were almost not talking. They were busy with their mobiles. There were different cans of soft drinks. I saw their bags beside them and food remnants.

Field notes for soft drinks (sample 2)

Area 1

14/11/2018, 11:15 am

An actor was sitting with a laptop, a soft drink and toast. Another soft drink was on the side with a snack.

19/11/2018, 10:00 am

Repetitive pattern. Actors had soft drinks, and the actors were using mobiles as well as laptops. Actors were eating, and the soft drink was included in the food meal deal (interview). The food was completely consumed (food remnants) and was not available although then the soft drink remained during the studying or mobile practices (this is a repetitive pattern).

22/11/2018, 10:25 am

Actors were distracted with their mobiles while consuming soft drinks at the same time. Their bags were beside the chair. The cans were transparent and very little remained of the soft drinks.

Area 2

5/11/2018, 9:50 am

An actor was sitting at a large table and was busy using a mobile, consuming soft drink as well.

14/11/2018 9:50 am

Many actors came to sit and prepare for their studying, opening their laptops and talking with their soft drinks in front of them on the table together with some food. There was one sugar containing soft drink as well as other sugar free soft drinks.

16/11/2018, 11:10 am

Two actors, one sitting at a table in front of a laptop to study while consuming an energy drink, the other was standing and talking to the first one (soft drink and studying only but this was an energy drink).

20/11/2018, 10:35 am

Two actors were sitting at a table. They were talking and there were one or two laptops and bags. One of them had a soft drink. I asked them what they were doing and they told me that they were about to have a lecture and that they were having a break. (interviewed)

Field notes for meal deals (sample 1)

Structure of the £3.50 meal deal in the Students' Union shop

We can pose many questions about why the £3.50 meal deal is constructed and arranged in this shop in a certain way.

In terms of drinks options, sugar-containing and non- or low-sugary drinks are both available in this type of meal deal, but the customer is restricted to a limited choice of sugar-free drinks. As we see in the above table, in this type of meal deal, customers can only choose between two sugar-free soft drinks, Diet Coke and Exotic Mango Diet Coke, while they can choose between six full-sugar soft drinks. Thus, if the customer wants to take the meal deal and does not want to drink Coke, they will be easily directed to full-sugar soft drinks. Additionally, if the customer wants to buy water and does not have a bottle to fill with free tap water, they will have only one choice of sugar-free water - the sparkling water - because the other choices are low-sugar bottled flavored still water.

In terms of the choice of bottles of water for sale, water bottles are not yet available in this meal deal, or even in the shop as a whole. However, free tap water is available if the customer brings a bottle with them. So currently, in terms of available water bottle options in this type of meal deal, only sparkling water and low-sugar flavored water are for sale. Additionally, we can see that the sparkling and flavored water bottles are usually placed at the sides of the shelves while the soft drinks dominate the middle area.

Another interesting point that I have observed is that the original prices of drinks are £0.75 and £0.80 if they are bought separately from the meal deal. However, this price can be dramatically reduced, to £0.005 in some cases, if the drink is included within the meal deal. For example, if the customer buys a Band T sandwich which costs £3.49 (the total meal deal cost is £3.50) and chooses two drinks for the other two items, then each drink will cost £0.005. The question that can be posed here is how a profit can be achieved in this way.

Field notes for meal deals (sample 2)

Structure of the £3.00 meal deal in the Students' Union shop

Like the other type of meal deal, in terms of drinks options, sugar-containing drinks and non- or low-sugar drinks are available in this type of meal deal, but the customer is restricted by a limited choice of sugar-free drinks. As we can see in the above table, there are only two choices of sugar-free drink, which are Diet Coke and Zero-sugar Coke, while there are four choices of full-sugar soft drinks. Thus, if the customer wants to take the meal deal and does not want to drink Coke, as in the previous meal deal they will be easily directed to full-sugar soft drinks. But in this type of meal deal, water choices are better because if the customer wants to buy a water bottle and does not have a bottle to fill with free tap water, they can have sugar-free flavored natural or sparkling water. However, there are still no unflavored still water bottles available for sale in this meal deal option.

The sparkling and sugar-free flavored water bottles in this type of meal deal are arranged on the shelves as in the previous type of meal deal: usually, they are placed at the sides of the shelves while soft drinks dominate the middle area.

Like the £3.50 meal deal, in this meal deal the original prices of the drinks are around £0.75 and £0.80 if they are bought separately from the meal deal. However, this price can be dramatically reduced.

Appendix 7. Map, pictures and floorplans of research settings



Figure 9. The University of Sheffield campus map

The students' Union shop is located in the Students' Union Building (number 120 on the campus map). The Students' Union building is located in the middle of the University of Sheffield campus map. It is circled in the image to make it easy to find. Zooming in on the image will provide a better view of its location.

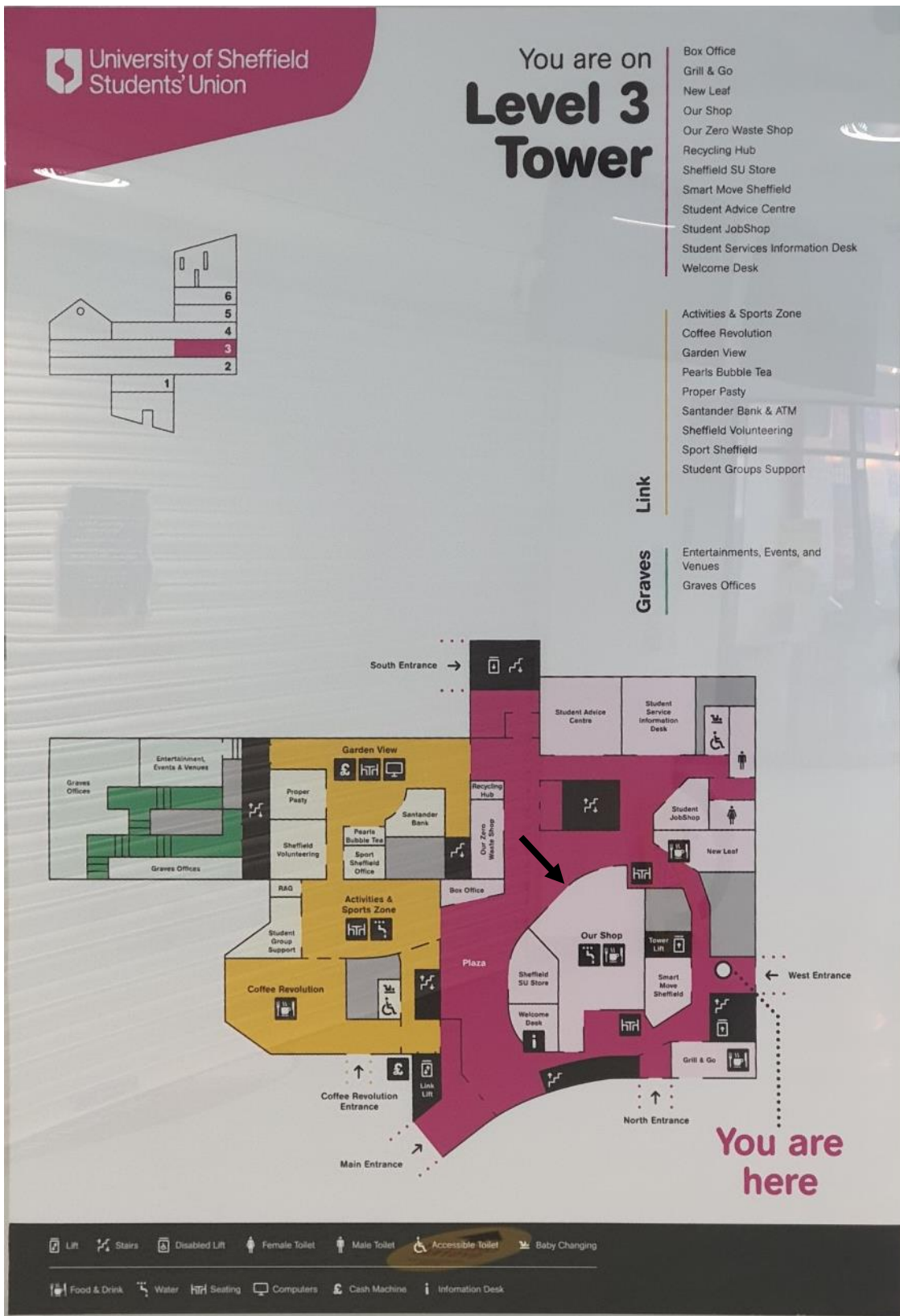


Figure 10. Students' Union building: floorplan of floor 3

The floorplan of the Students' Union shop is located within the floorplan of the Students' Union building's third floor, indicated as "Our Shop". The shop is marked with an arrow in the floorplan. Zooming in on the image will provide a better view of the shop's location.



Figure 11. Students' Union shop: external view from side 1



Figure 12. Students' Union shop: external view from side 2



Figure 13. Students' Union shop: internal view from side 1



Figure 14. Students' Union shop: internal view from side 2



Figure 15. Study area in the Students' Union building: view from side 1



Figure 16. Study area in the Students' Union building: view from side 2