Unpacking Dietary Inequalities: Food Shopping, Mothers, Money and Morals

by

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Conference presentations arising from this thesis


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Abstract

Disparities in diet quality between the wealthy and the poor are often attributed to higher prices of healthy foods in comparison to less healthy options. While prices are fundamental in consumer decisions, socio-cultural factors also play a key role in individuals’ food purchasing choices. The concept of ‘good value’ is ubiquitous in the modern food shopping landscape, but getting good value when making food purchases is more complex than making straightforward economic calculations. This thesis uses the notion of ‘consumer value’ as a framework with which to more thoroughly unpack individuals’ perceptions of the healthy and unhealthy foods that they encounter as they shop.

The current study aimed to gain new insights into how and why inequalities in food purchasing patterns are produced and reproduced. A mixed methods approach was used, initially to examine purchasing patterns of healthy and unhealthy foods at a population level, and then to explore, in depth, the perceptions of value around these items held by high- and low-income consumers.

The first stage of this study employed a quantitative analysis of household expenditure data to establish the current (2009) picture of income-related food purchasing patterns in the Australian population. This analysis focussed on how households allocated their total grocery expenditure to a range of healthy and unhealthy food groups, as defined by current dietary advice. The results confirmed that there is a complex relationship between income and food spending patterns in the Australian context. However, the income-related expenditure patterns seen in some specific food groups did reflect dietary inequalities, such as those for the food groups of fats and oils, fruits and processed meats.

The second, qualitative phase of this study aimed to further understand why such inequalities exist. Twenty-two semi-structured, in-depth interviews were undertaken with a purposive sample of mothers of primary school-aged children from high- and low-income areas of Melbourne, Australia. Using a broad conceptual framework of consumer value as a starting point, this study explored participants’ perceptions of value in the range of foods that they regularly purchased, particularly in regards to considerations of nutrition and cost. A descriptive analysis of the interview data revealed that participants constructed their notions of value around healthy and unhealthy foods on three different levels: perceptions of food items; perceptions of food practices; and perceptions of food responsibilities. The emergent theme of
responsibility in participants’ constructions of value around food was further investigated by employing a governmentality analysis to explore the ways in which participants constructed themselves as ‘good shoppers’, ‘good mothers’ and ‘good citizens’ by drawing on the broad discourses of quality and thrift, and the more tightly focussed discourses of nutrition and cost. The governmentality analysis demonstrated that the ways in which participants constructed themselves in relation to their food and food shopping practices, and consequently their notions of value around healthy and unhealthy foods, were shaped by both practical and moral concerns. It also revealed that ways of perceiving value, in terms of the discourses of quality and thrift, were socially patterned. Income however, did not entirely account for the social patterns seen. Instead, income together with the social and cultural resources that participants had at their disposal, influenced their ‘habitus’ or way of seeing the world, that in turn shaped the way in which they prioritised the various moral discourses that circulated around food shopping, food practices and value.

When combined with the quantitative findings, these qualitative findings provided some explanations for the complex income-related patterns seen in the household expenditure data. Thus, the different ways in which consumers prioritise the practical and moral concerns associated with both cost and nutrition to construct their perceptions of value, may be one mechanism that underpins the production and reproduction of socio-economic inequalities in diet.

In identifying this mechanism, this study makes a significant contribution to public health understandings of socio-economic inequalities in diet, and points to some potential avenues for future research. In addition, by calling attention to the diverse ways in which consumers construct their perceptions of value when food shopping, this study highlights the importance of public health researchers and practitioners reflecting on our own ways of ascribing moral meaning to healthy and unhealthy foods choices. Understanding and acknowledging that people may perceive healthy and unhealthy food choices in a very different ways enables us to work towards developing more effective public health interventions and policies to minimise socio-economic inequalities in diet.
Preface

My own interest in food and health, whilst new in my professional life, is long standing in a personal sense. I grew up in a family who placed a strong emphasis on the link between food, bodies and health, both at home and via my parents’ work as medical doctors. In my early twenties, I trained and worked as a physiotherapist. I gravitated towards paediatric physiotherapy as I enjoyed treating children and interacting with them and their families. However, it soon became apparent that I was more interested in the complex relationships between parents, their children and health professionals, and how these relationships impacted on health issues, than the physical problems that were focus of my professional role. Driven by these interests, and a desire to have more of an impact on the ‘upstream’ factors relating to health problems and health-related behaviours, I returned to university to study public health, first as a coursework student, and then as a PhD candidate. Working in the field of public health nutrition occurred perhaps more by chance than design, but given my natural interests in both food and family dynamics, it was a comfortable fit.

As a newcomer to the field of public health nutrition, the first phase of my PhD candidature was spent ‘familiarising’ myself with the literature. Early on, I took an interest in economic approaches to food choice, as the relationship between the prices of foods and their energy density was gaining traction within the field as an important explanatory factor of the ‘obesity epidemic’ in the Western world. This seemed to me an over-simplistic explanation, so I hoped to investigate some of the more nuanced aspects of the way that finances and ‘healthy’ food choices might be linked.

Two papers I came across in this early period directed the research questions that I set out to answer in this project. Together, these papers each highlighted some of the complexities of real world food choice behaviour that I felt were often overlooked within public health nutrition. The first, which demonstrated that parents often knowingly choose unhealthy foods for their children (Noble et al. 2007), seemed to be at odds with the generally accepted idea that if people are ‘educated’ about healthy foods, they will make healthier choices. The second paper, titled “One little Lebanese cucumber is not going to break the bank” (Owen et al. 2002), captured how it is not only an individual’s perception of the price of a food item that influences purchasing decisions, but also how that monetary cost relates to the immediate personal context in which the purchasing decision takes place. Reflecting on these two papers together led me to question the adequacy of current
understandings of food choice in the field of public health to account for these complex examples of food choice behaviour.

As this project spanned more than five years, my perspectives on both my data and my field of enquiry changed substantially over the course of my study. On reflection, these changes were largely the result of shifts in both my personal circumstances and my intellectual understanding of the topic and the broader academic context in which it resides.

Given my previous experiences working with families and my own interests in family dynamics and food, it was a natural choice to explore the food purchasing patterns of mothers with young families in this doctoral project. However, my perspectives on this particular participant group changed as my own personal circumstances changed. When beginning the study, I was living with my long-term partner. By the end of my candidature, we had bought a house, got married, had our first child and become pregnant with our second. Becoming a mother, which occurred in the middle of the qualitative data analysis phase, undoubtedly changed the way I thought about my qualitative data. My understanding of the complexities of the decisions that the mothers I interviewed were making for their own families changed once I had been personally exposed to the discourses circulating around mothering in middle-class Australia. Navigating my own way through these discourses, particularly those around infant feeding and sleeping, made me far more aware of the powerful moral pressures that women can experience as they sort out how to be the ‘best’ parent that they can be.

My perspective on my project also changed as I expanded my academic understandings of my topic. With my biomedical background I had little to no knowledge or understanding of social theory when embarking on this project. As such, the project became an apprenticeship of sorts, as I was introduced to the social theories of Michel Foucault and Pierre Bourdieu, and began use these ideas to explore and understand my own empirical data.

Foucault’s work around governmentality had a particularly strong influence on my perception of the data from this project. It was completely new for me to contemplate how the discipline of public health, through its efforts to make individuals and communities more self-reliant and self-determining, is deeply intertwined with the neo-liberal discourse that is dominant in modern society (Petersen 2003). Reflecting on this made me question how my own project might
therefore fit within the power structures that exist in modern society. I became uncomfortable upon realising that my own project might indeed be adding to discourses that position some individuals as ‘bad’ or ‘immoral’ if they do not make the ‘right’ food purchasing choices in nutritional terms. From my interviews I had a firm belief that all the mothers I met were making carefully considered choices around their food purchases, and that their decisions were 'right' for them and their families. Therefore, the idea that my work might cast some of the participants I had interviewed as 'good' and others as 'bad' was disconcerting.

As I continued to read, and discuss these issues with my supervisors and colleagues, I began to make a deliberate shift within my work towards a more Foucauldian aim of examining what ‘is’ rather than trying to determine what ‘should be’. However, I struggled with reconciling this somewhat observant purpose with what I felt was the expectation in my field to more actively ‘do something’, or provide ‘answers’ about how to improve the health of the population. At the conclusion of this project, I do feel my work sits comfortably within the public health context, and I hope it offers a valuable contribution to the field, even if it is different to that which I originally imagined. Rather than helping to understand how different groups make food purchasing decisions in order to contribute to the quest to turn people’s ‘bad’ food choices into ‘good’ ones, I now hope that this work encourages public health practitioners and policy makers to think more deeply about the moral motivations that may underpin individuals’ food choices, and perhaps be less inclined to automatically assume that others hold similar values around food to their own.
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<thead>
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<th>Description</th>
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<tbody>
<tr>
<td>ABS</td>
<td>Australian Bureau of Statistics</td>
</tr>
<tr>
<td>AIHW</td>
<td>Australian Institute of Health and Welfare</td>
</tr>
<tr>
<td>BFS</td>
<td>Brisbane Food Study</td>
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<tr>
<td>CCD</td>
<td>Census Collection District</td>
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<tr>
<td>CURF</td>
<td>Confidentialised Unit Record Files</td>
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<td>GFC</td>
<td>Global Financial Crisis</td>
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<td>GLM</td>
<td>Generalised Linear Model</td>
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<tr>
<td>HES</td>
<td>Household Expenditure Survey</td>
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<tr>
<td>NHMRC</td>
<td>National Health and Medical Research Council</td>
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<tr>
<td>SES</td>
<td>Socio-economic Status</td>
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Chapter 1
Introduction

1.1 Problem statement and aim

Diet and health are inextricably linked. A large proportion of the Australian population fails to eat a diet that is in line with current nutritional recommendations. However, the levels of diet-related disease and unhealthy dietary habits are more prevalent in those who live in socio-economically disadvantaged circumstances.

As with many inequalities in health-related behaviours, we have a much better understanding of which specific demographic and socio-economic factors are associated with higher rates of less healthy dietary behaviours, than we do of the exact mechanics of how these inequalities in food choices are produced. This lack in understanding of how and why socio-economic inequalities in diet are produced, and continue to be reproduced, presents a major challenge for the design of effective public health interventions and policies to improve diets and reduce nutritional inequalities.

Economic approaches to understanding dietary inequalities have received much attention in the public health literature in recent years. Economic approaches propose that economic factors, such as levels of income and the relative costs of healthy and unhealthy foods, play a substantial role in the production of dietary inequalities. However, one significant limitation of this economic approach is the lack of consideration given to the complex socio-cultural contexts in which food choices take place. As such, the current study draws on the concept of ‘consumer value’, which considers how both economic and socio-cultural factors influence food purchasing decisions, as a way of further exploring the food choice behaviours of Australian consumers from a range of socio-economic backgrounds.

By exploring how individuals perceive value when shopping for healthy and unhealthy foods, this study aims to explore, and reveal, some of the mechanisms that may underpin the production and reproduction of socio-economic inequalities in the nutritional value of food choices. In doing so, this thesis seeks to contribute to public health understandings of the origins of socio-economic inequalities in diet, in order to strengthen the foundation from which effective public health interventions and policies can be developed.
Chapter 1 - Introduction

1.2 Scope

Given the breadth of the territory that may potentially be covered by a thesis focused on both economic and socio-cultural influences on inequalities on diet, it is necessary to draw some boundaries within which this study operated.

This mixed methods study was conducted in Australia, and drew on quantitative data collected at a national level, and qualitative data collected in Melbourne, Victoria. Accordingly, the focus of this thesis is on food choice inequalities in Australia. Where possible, the literature drawn on to contextualise the research problem and the findings of this study predominantly originates from Australia (and the state of Victoria where possible) or other similar high-income countries such as the New Zealand, the UK, the USA and Canada.

Given the recent emphasis of economic influences on dietary behaviours in the public health literature, this thesis set out with a focus on income as the key socio-economic factor of interest. As food choice is a complex process, this interest in the influence of economic factors narrowed the scope of enquiry to food purchases, as it is at this point in the food consumption process where economic factors are most relevant to food choices. Finally, given the importance of social and cultural factors in food choices this study examined food-purchasing decisions at a household, rather than individual level.

1.3 Outline of this thesis

Chapter 2- Literature review, explores selected public health literature and that from the broader field of food choice research. The chapter begins by outlining the link between diet and health, inequalities in health and diet and broad understandings of food choice. I then focus on how public health has drawn on both economic and socio-cultural approaches to understand the problem if inequalities in diet, and discuss the ways in which these two different approaches complement each other. The notion of ‘consumer value’ is then presented as a vehicle for bringing together both economic and socio-cultural approaches to food choice in an attempt to improve our understanding of the mechanisms that might underpin the production and reproduction of socio-economic inequalities in diet. Finally, the gaps and questions raised by the literature review are outlined together with the study aim and research questions.
Chapter 3- *Mixed methods study design*, justifies the selection of a mixed methods approach as an appropriate research design to address the aims and research questions for this study. The objectives, methods and sources of data for each of the quantitative and qualitative phases of the study are introduced. The mixed methods design, which described how the two phases fit together in practical and theoretical terms, is described in detail. Full explanations of the methodology and methods employed in each research phase are presented in Chapters 4 (quantitative) and 5 (qualitative).

Chapter 4- *An analysis of the Household Expenditure Survey*, presents a detailed account of the methodology and methods that were employed in the quantitative phase of this mixed methods study in order to fulfil the first of the research objectives derived from the literature review. The findings from this analysis of the Australian Bureau of Statistics (ABS) Household Expenditure Survey (HES) are also presented which illustrate the relationships between income and proportional expenditure allocated to a range of healthy and unhealthy food groups by households within the HES sample.

Chapter 5- *Qualitative methodology and methods*, details the methodology and methods used to undertake the qualitative interview study which forms the second, qualitative phase of this mixed methods study. This chapter discusses the theoretical foundations of the qualitative phase together with the sampling, data collection and data analysis procedures and processes.

Chapter 6- *Descriptive analysis of the qualitative data*, presents the findings from the primary, descriptive analysis of the qualitative interview data. This descriptive analysis works towards answering the first of the two qualitative research objectives, broadly describing how the diverse group of participants perceived value in the range of food items they considered for purchase, with attention paid to the role of cost and health considerations within these perceptions.
Chapter 7 - Discourse analysis of the qualitative data, describes the findings from the discourse analysis of the qualitative interview data. This chapter aims to address the second qualitative research objective, and uses a governmentality approach to examine the similarities and differences in how participants from different socio-economic backgrounds regulated their food shopping practices by drawing on the discourses that circulate around food in their everyday worlds. An overview of the theoretical literature drawn on in this final stage of the qualitative data analysis is presented early in the chapter. A detailed description of the findings interrogates the ways in which participants regulated their food shopping practices and constructed themselves as ‘good shoppers’, ‘good mothers’ and ‘good citizens’. Through this analysis, we see how participants constructed their perceptions of value in the range of foods they encountered in their everyday shopping practices.

Chapter 8 - Discussion of quantitative and qualitative findings, considers the findings from each of the two research phases in light of the relevant quantitative and qualitative research questions and objectives, and places them in the context of the relevant bodies of literature. The findings from each phase are discussed separately, with the quantitative findings discussed first, then the qualitative. Within each section, the contributions made to the relevant existing literature are considered together with the limitations of each research phase.

Chapter 9 - Mixed methods inferences and conclusion, draws together the findings from the quantitative and qualitative research phases and discusses the inferences, or overall learnings, that can be drawn from this mixed methods study in light of the overall aim and research question. The strengths and limitations of the mixed methods approach are discussed, as well as the implications for future public health research and practice.
Chapter 2
Literature review

2.1 Chapter overview

This chapter explores selected areas of the literature from the fields of public health and food choice research. I begin by providing a broad context for the current study, outlining links between diet and health, and describing how diet is socially patterned. I then explore the ways in which food choice has been understood by a broad range of academic disciplines, and discuss how the existence and production of inequalities in diet have been understood from public health perspectives.

In the second main section, I argue that lack of understanding of the mechanisms which produce and reproduce inequalities in the nutritional value of food choices is a key issue for public health nutrition. I then explore how the economic and socio-cultural perspectives to understanding food choices each offer some important insights into the mechanisms underlying food choice inequalities, but argue that to date, these approaches have rarely been combined in this area. Finally, I present the concept of ‘consumer value’ as a framework that can be employed to explore ways in which both economic and socio-cultural factors may contribute to the production and reproduction of socio-economic inequalities in the nutritional value of food choices.

2.2 Diet, health and socio-economic inequalities

2.2.1 The burden of diet-related disease

Over the past century, the nature of illness and disability has undergone a massive transition away from infectious diseases toward chronic diseases, particularly those associated with lifestyle factors (Australian Institute of Health and Welfare (AIHW) 2002). Chronic diseases, including cardio-vascular disease, cancer and diabetes mellitus, now account for the majority of the burden of disease in Australia (AIHW 2002; Institute for Health Metrics and Evaluation 2013).

An unhealthy diet is clearly associated with increased risk of developing many diseases including; coronary heart disease, stroke, hypertension, type 2 diabetes, obesity, osteoporosis, dental caries and some forms of cancer (AIHW 2012b;
National Health and Medical Research Council (NHMRC) 2013c). Globally, a substantial burden of disease can be attributed to poor dietary habits including the overconsumption of certain foods, or food components (World Health Organization 2002). The shift of diets towards those that are sweeter, more energy dense, higher in fats and lower in dietary fibre is thought to be a key factor in the rapidly increasing rates of diet-related disease seen worldwide (Popkin 2006). Indeed, recent evidence suggests that a range of diet-related risk factors (such as diets low in fruits or fibre) account for the largest proportion of burden of disease in Australia (Institute for Health Metrics and Evaluation 2013; Lim et al. 2012). As a ‘modifiable’ risk factor for a range of chronic health issues (AIHW 2012a) the nutritional quality of peoples’ diets at the individual, group and population levels are therefore an important focus for public health research, policy and practice.

2.2.2 Socio-economic inequalities in health and diet

The existence of socio-economic inequalities in health are well-established in Australia and across the globe. A strong body of evidence demonstrates that people from socio-economically disadvantaged groups tend to experience more ill-health and are more likely to either engage in behaviours, or have a risk factor profiles, that are consistent with poor health status (Turrell et al. 2006).

Diet-related disease, such as heart disease, diabetes and obesity are not equally distributed amongst all groups in society. For example, in high income countries, those of lower socio-economic status (SES) tend to have higher rates of obesity (Ball & Crawford 2005; McLaren 2007; Sobal & Stunkard 1989). In Australia, 21% of adults from low-income households are obese compared to 15% of adults from high-income households (Australian Bureau of Statistics (ABS) 2008b). More recent evidence suggests that this gradient in excess body weight may be a particular concern for Australian women, with 63.8% of female adults from the most socially disadvantaged areas overweight or obese compared to 47.7% of those from the least disadvantaged areas (ABS 2013).

Many studies conducted both in Australia and overseas indicate that the dietary habits of lower-SES groups are further from the nutritional guidelines than those of higher-SES status. Socio-economic differences have been observed by studies measuring: the intake of specific food groups such as fruit and vegetables (Ball et al. 2006; De Irala-Estevez et al. 2000; Giskes et al. 2002a; Giskes et al. 2002b); overall
dietary intake (Deshmukh-Taskar et al. 2007; Milligan et al. 1998; Nelson et al. 2007; Smith & Baghurst 1992; Wood et al. 2000); measures of diet quality (Basiotis et al. 2002; Guenther et al. 2008; Roos et al. 1998); and adherence to dietary recommendations, or consuming recommended ‘healthier options’ (Lallukka et al. 2007; Smith & Baghurst 1992; Wood et al. 2000). Most Victorians do not meet the recommended guidelines for healthy eating behaviours such as consumption levels of fruits and vegetables, but individuals of lower SES tend to have consistently lower intake than the general population (Department of Health Victoria 2011). While a substantial body of evidence exists which describes the nature of diet-related inequalities, the exact mechanisms by which they are produced and reproduced remains poorly understood.

2.2 Understanding differences in food choice

2.2.1 Overview of factors that influence food choices

There are a myriad of factors that are thought to influence the food choices made by individuals and groups (Fieldhouse 1995; Nestle et al. 1998; Rozin 2006). Within the discipline of public health it is widely acknowledged that health status and the environment are inextricably linked (World Health Organization 1986). Thus, modern public health approaches regard food choices, along with other health behaviours, as being broadly determined by a wide range of inter-related individual and environmental factors (Brug et al. 2008; Egger & Swinburn 1997; Nestle et al. 1998; Sobal et al. 2006).

Socio-ecological approaches to population health problems theorise how a range of environmental factors on a number of levels may influence specific health issues. These approaches propose that in order to be effective, public health interventions are required at multiple levels. Socio-ecological models are used to visually map a wide range of potential environmental factors, and represent their proposed relationships to a specific health problem or behaviour. An example of a socio-ecological model that has been developed to describe the range of potential influences on food choices is presented in Figure 2.1. It highlights four levels of factors which are each thought to influence food choice: psychological and biological influences, cultural factors, social factors and a broad range of other factors which are labelled 'enablers of choice'.
2.2.2 Approaches to understanding food choice

Given the complexity of food choice, and the broad range of potential factors involved in food choice decisions, the study of food choice has been undertaken by researchers from many academic disciplines (Albala 2013; Rozin 2006; Sobal & Bisogni 2009). While some studies, particularly those examining this issue from public health perspectives, attempt to understand the complex interactions between two or more different types of factors involved (see for example, (Furst et al. 1996)), in the broader field of food choice research, there has been a tendency for different academic disciplines to examine specific factors in isolation (Shepherd & Raats 2006). It is beyond the scope of this literature review to provide a detailed appraisal of all academic understandings of food choice. However, to locate this study within the broader literature, it is important to acknowledge the diversity of factors that are understood to influence food choices, and how researchers from a range of disciplines have examined these in order to understand how individuals and groups make their food choices.
Chapter 2 - Literature review

This section summarises how the main factors which are understood to influence food choice have been examined from a range of disciplinary approaches. The factors influencing food choice can be classified using a multitude of typologies, but to reflect public health approaches to food choice, here, I classify these factors as ‘individual level factors’, ‘intermediate factors’ and ‘broader environmental factors’. This organisational structure generally aligns with that of the socio-ecological model displayed in Figure 2.1. There are some differences between my categories and those of the socio-ecological model above, but, what I have termed individual level factors generally refer to those in the model’s psycho-biological core, my intermediate factors represent many of their social and cultural factors, and my broader environmental factors align with many of the factors presented in the model as enablers of choice.

**Individual level factors**

Individual factors are characteristics that are unique to each person. Individual factors that influence food choice encompass biological, as well as psychological and emotional characteristics. The way that these factors influence food choice are usually investigated from biological or psychological perspectives.

Some biological approaches to food choice focus on explaining what is going on in the body and brain at the moment of food choice. For example, work in this area might use animals such as rats, to understand how metabolic and neural signals are processed and lead to specific food choice outcomes (Rozin 2006). As individual food preferences are thought to have a strong bearing on food choices, the ways in which preferences are developed have also received much attention in these disciplines. Research in this area has covered topics as diverse as the innate preferences of newborn babies for sweet versus sour or bitter tasting foods (Steiner 1977), and the learning processes involved in the shift of taste preferences over time, such as those when people come to like the bitter flavour components in foods and drinks that contain alcohol or caffeine (Yeomans 2006). Psychological approaches to food choice also tend to focus on the cognitive processes that are acting when individuals make their food choices. For example, research in this area has examined the ways in which moods and emotions influence food choices, along with how the consumption of specific foods in turn effect moods and emotions (Gibson 2006). Other studies have looked at how rewards, cravings or other motivational factors influence food choice (Higgs 2006) or how factors such as memories, attitudes and
beliefs play a role in individuals’ appraisal of food options, and therefore help to explain their choices (Conner & Armitage 2006; Rozin 2006).

**Intermediate factors**

**Resources**

The range of resources that people have at their disposal also influence their food choices. In this sense, resources can be understood to include a variety of tangible and intangible assets such as physical capital (e.g., money, equipment and transportation), human capital (e.g., time, skills and knowledge) and social capital (e.g., help from others, advice and social support) (Sobal et al. 2006).

Much of the research around the relationship between resources and food choice has been undertaken from a public health perspective, but given the wide range of factors involved, research in this area often draws on other disciplinary approaches including health education, sociology and economics. In general, the resources people have at their disposal are thought to make some food choices possible and others less so. For example, food management skills, such as saving money on food, or being a good cook, have been shown to be durable resources that individuals can accumulate throughout their lives, which have a positive influence on their capacity to make food choices (Bisogni et al. 2005). Other research focussing on the influence of resources on food choices highlights how the types of foods purchased in low-income, food-insecure families varies substantially depending on how much money is available, with ‘treat’ foods, such as chocolate biscuits, being bought when money is available, and ‘basic’ foods, such as pasta and tinned tomatoes, chosen when money is tight (Burns et al. 2013).

**Socio-cultural factors**

The ways in which food choices of individuals are influenced by broader social and cultural systems have long been examined from both sociological and particularly anthropological perspectives. The concepts of ‘culture’ and ‘society’ are sometimes used interchangeably, and while they are closely related (hence the use of the term socio-cultural), they are not in fact the same. Culture can be most usefully understood to refer to the sum total of a group’s learned, shared behaviour, while society describes the people who participate in the culture and thus give culture concrete expression (Fieldhouse 1995). Thus, we can broadly consider social factors to be those to do with the more immediate relationships and interactions that people
have with one another, while cultural factors are those underpinning group ideals and patterns of learned behaviour at a broader level.

Some of the many issues covered by food choice studies undertaken from socio-cultural perspectives include how social norms, social processes and social roles influence food choices. Other issues addressed include how cultural definitions and identity or symbolic values of food relate to people’s food selections. For example, socio-cultural studies have shown how the provisioning of food can be understood to be an act of caring within family unit, as evidenced in the ways that food selections are ‘made’ by mothers, but are in fact strongly influenced by the perceived preferences of their male partners (Charles & Kerr 1988; DeVault 1991) or children (Anving & Thorsted 2010; Dixon & Banwell 2004). Food choice behaviours within families have also been demonstrated to be deeply rooted in cultural understandings of love, nurturing, parenting and health (Anving & Thorsted 2010; Kaufman & Karpati 2007).

**Broader environmental factors**

With increasing interest in the relationship between the rising levels of chronic disease and diet, public health approaches to the study of food choice have recently taken a strong focus on the broader environmental determinants of food choice. Key issues here revolve around how food environments influence the availability, accessibility and affordability of foods. Studies in this area often draw on approaches from disciplines such as economics or geography to understand how various components of our environments, such as the economic or built environments (Swinburn et al. 1999), influence the availability or accessibility of different foods, and how these in turn might influence food choices. For example, geographical studies have shown that there is significantly poorer physical access to healthy foods in areas inhabited by disadvantaged groups in the USA, although findings are far less consistent in the UK and Australia (Cummins & Macintyre 2006).

Both the broader environmental factors and the resources people have at their disposal influence issues such as the affordability or accessibility of foods. This means that public health studies focussed on the environmental influences on food choice often also pay attention to peoples’ levels of resources and how they facilitate individuals’ interaction with their environments. For example, studies of the geographical accessibility of healthy and unhealthy foods in Australia highlight how the ability to access private transport (e.g., a car) appear to be more important than
geography alone (Burns & Inglis 2007; Coveney & O’Dwyer 2009). Similarly, economic approaches to food choice highlight that both individuals’ financial resources and the costs of different food products influence how food choices are made (Burns et al. 2013).

2.3 Understanding inequalities in the nutritional quality of food choices

2.3.1 Public health understandings of socio-economic inequalities in diet

The aim of public health policy, practice and research is to prevent disease and promote the health of the population (Stover & Bassett 2003). In relation to food and diet, the general goal of public health policy and practice (from here on collectively referred to as ‘interventions’) is to shift population-level eating patterns to become more healthy, in order to reduce the incidence and burden of diet-related disease.

In terms of socio-economic inequalities, public health seeks to promote more equal dietary behaviours and diet-related health outcomes across the socio-economic spectrum. This means that in order to be deemed effective in reducing inequalities in diet, public health interventions need to be more effective in disadvantaged groups, or at a minimum be equally effective across all groups, so that the gap between the healthy eating habits of people from high- and low-socio-economic backgrounds is not widened (Kristjansson et al. 2007).

As the growing burden of dietary-related disease attests, designing and implementing interventions to improve healthy eating remains a significant challenge for public health. Traditionally, many dietary interventions have used methods involving individually targeted health education and dietary advice to try and improve healthy eating habits (Ni Mhurchu 2010). These types of interventions have been shown to be both expensive and to have limited effects (Vos et al. 2010). Efforts to reduce inequalities in dietary patterns have also had limited success. Indeed, there is even some suggestion that some public health interventions targeting dietary habits may in fact worsen socio-economic inequalities rather than improve them (Capewell & Graham 2010; Oldroyd et al. 2008). However, it is important to note that this difficulty in reducing socio-economic inequalities is not limited to interventions targeting dietary habits, but rather, is a challenge for public health practice across a
range of health-related behaviours (Frohlich & Potvin 2008; Frohlich & Potvin 2010; McLaren et al. 2010).

This lack of success in improving eating habits, and in particular in reducing inequalities in diet, leads us to ask the question: Why are we unable to design effective interventions?

We know a considerable amount about who eats what. The socio-economic correlates of poor eating habits are highly researched, with studies across a range of high-income countries tending to show that lower levels of income, education and occupation are often associated with diets that are less consistent with nutritional guidelines (Vlismas et al. 2009). However, knowing who eats what is not a sufficient knowledge base on which to build effective public health interventions. As Schofield (2007) argues, we need to understand more about how factors, such as low levels of income or education, actually lead to the production of inequalities in health-related behaviours:

In relation to health inequity, the problem for, or object of, policy is not a social or environmental factor, or even a combination of such factors. It is the specific social dynamics and structures involved in producing the identified relationship between health patterns and social and environmental factors (p. 108, emphasis in original).

The delineation here between the factors associated with food choices of different nutritional quality and the mechanisms that produce these differences is key to understanding the current state of knowledge around socio-economic inequalities in this field. The emphasis in the public health literature on factors associated with poorer quality food choices is not balanced with a solid understanding of how these factors translate into the selection of healthy or less healthy foods or diets by particular individuals or groups.

This imbalance in public health knowledge, knowing plenty about who eats what, but little about why exactly they do, makes it difficult to design effective interventions to reduce dietary inequalities. Without being based on a clear understanding of what it is that makes disadvantaged groups behave in certain ways, the task of designing public health interventions must therefore involve some degree of assumption. This means that in some cases, interventions become speculative rather than evidence-based (Schofield 2007). For example, our lack of understanding of the mechanisms producing inequalities in the nutritional value of food choices often means that well-intentioned interventions continue to employ individualistic
strategies targeted at identified ‘at-risk’ groups (Attree 2006), despite evidence that these types of interventions have minimal effects at best (Brug et al. 2008; Vos et al. 2010).

Given the need to improve our understanding of the mechanisms that produce socio-economic inequalities in the nutritional quality of food choices (referred to as simply ‘inequalities in diet’ from here on), the rest of this section outlines the findings from two key approaches to this issue within the current public health literature. In doing so, I aim to map a potential path that may be taken to move our understandings of this public health problem forward. I begin by examining, in-depth, the economic approach to understanding dietary inequalities (Section 2.3.2), and highlighting its strengths and weaknesses. Then, I examine how some specific elements of socio-cultural understandings of food choice (Section 2.3.3) may be used to cover some of the crucial gaps which are not addressed by economic approaches. In the subsequent section (Section 2.4), I propose one way in which these two approaches could be used together to further our understanding of the mechanisms which produce socio-economic inequalities in diet.

2.3.2 An economic approach to socio-economic inequalities in diet

At the time that the current study was being designed, a prominent argument in the public health literature was that inequalities in diet, and in particular the growing prevalence of obesity, are primarily driven by economic factors (Drewnowski 2009). This economic approach to inequalities in diet has continued to draw significant attention in the field of public health nutrition. The inter-disciplinary nature of this area of research means it has attracted the attention of researchers not only from a range of areas within public health (such as epidemiology, food security and nutrition education) but also researchers from areas outside the public health arena (such as economics and agricultural economics). The strong traction gained by this economic approach to examining dietary inequalities in the Australian public health context is illustrated by its inclusion in the discussion of equity and nutrition in the most recent Nutrition Guidelines released by the Australian National Health and Medical Research Council (NHMRC 2013b).
The economic approach to food choice inequalities draws together three significant concerns about who eats what, and why, in high-income countries:

a) **Socio-economic patterning of healthy eating habits**- As outlined above, there is substantial evidence, using a variety of SES indicators, that suggests people from socio-economically disadvantaged backgrounds tend to have nutritionally poorer diets than those in more advantaged circumstances (see p. 6).

b) **Cost is an important factor in food choice decisions**- Both qualitative (Bisogni et al. 2012; Charles & Kerr 1988; Inglis et al. 2005) and quantitative (Glanz et al. 1998; Lennernas et al. 1997; Steenhuis et al. 2011) studies demonstrate that cost is a key factor in food purchasing decisions. It is logical that in the context of limited financial resources the cost of food items becomes more salient in these decision making processes, and this proposition is well supported by studies that compare the perspectives of high- and low-income shoppers (Inglis et al. 2005; Maubach et al. 2009; Steenhuis et al. 2011).

c) **The affordability of healthy foods**- Concerns around the affordability of healthy foods stem from observations of price differentials between healthy and unhealthy foods. When food costs are considered in the context of the financial resources available within low-income households, it has often been argued that healthy diets are out of reach for low-income groups both in Australia (Kettings et al. 2009; Tsang et al. 2007; Ward et al. 2013; Wong et al. 2011) and elsewhere (Cassady et al. 2007; Fulp et al. 2009; Williams et al. 2006).

Building on this foundation, the rationale underpinning an economic approach to inequalities in diet is that higher relative prices of healthy foods, compared to less-healthy foods, encourage individuals and groups with lower levels of financial resources to select foods that are nutritionally poor. The key elements of established economic theory that are drawn upon by these economic approaches are that there are always limitations on consumers’ choices (Young et al. 1998) and that an individual will, within these limitations, purchase the best possible mix of goods and services in order to maximise their overall ‘utility’ (welfare or happiness) (Begg et al. 2005). In terms of food choices, these limitations are thought to include: the price of
the food product; the relative price of all other food and non-food products; and the consumer’s income (Young et al. 1998).

There is a substantial body of research that examines how economic factors may contribute to the production of socio-economic inequalities in food choices. The rest of this sub-section explores the current state of knowledge in this area. The evidence here is organised into three groups that reflect the components of the socio-ecological model of food choice presented above (see p. 8), specifically: the influence of the economic aspects of the food environment (an enabler of choice) on the nutritional quality of food choices; the influence of the economic resources people have (a social factor) on the nutritional quality of food choices; and the influence of both the economic aspects of the food environment and economic resources on the nutritional value of food choices.

**The influence of the economic aspects of the food environment on the nutritional quality of food choices**

Studies examining the affordability of healthy foods have been undertaken from a number of different perspectives. Here, I present an overview of studies within this area that focus specifically on the prices of healthy and unhealthy foods, and those that examine how people’s purchases of healthy and unhealthy foods are related to pricing issues.

Evidence is drawn here from a number of different countries. However, measures of food prices and affordability need to be considered within their local contexts, as the food price environments, and thus the affordability of foods vary significantly between countries. For example, in 2012 the share of total consumer expenditure allocated to food purchases in the USA was 6.4% while in the UK it was 9.1%, Canada 9.6% and Australia 10.2% (USDA Economic Research Service 2013).

**Is the nutritional quality of food related to price?**

There is some evidence to suggest that nutritionally ‘recommended’ grocery products are more expensive than ‘regular’ or ‘standard’ products. Studies comparing food baskets of regular food items compared to baskets with nutritionally recommended items (e.g., full cream versus low fat milk) have found that recommended items are more expensive in the USA (Jetter & Cassady 2006) and the UK (NCH Action for Children 2004), and slightly more expensive in New Zealand (Ni Mhurchu & Ogra 2007). It is important to note that due to the focus on regular versus recommended
grocery items, these studies did not include fruits and vegetables. In Australia, fruits and vegetables are estimated to make up about 34-41% of the cost of a healthy diet (Harrison et al. 2007; Tsang et al. 2007), so, while the costs of ‘healthier options’ seem to be at least a little more expensive than standard items, these studies are not indicative of the cost of a complete healthy diet.

Another method used to assess the relative costs of healthy and unhealthy foods is assessing the nutritional composition of foods, and merging that information with large datasets of local food prices. These types of studies have been conducted in France and the USA, and have demonstrated an inverse relationship exists between the energy-density of a food product and its energy cost (Drewnowski & Darmon 2005; Drewnowski & Specter 2004; Drewnowski 2009). This means that less healthy energy-dense foods such as potato chips (crisps) or chocolate provide energy at a much lower cost (≈20 cents/MJ) than do healthier, ‘energy-dilute’ food items such as fruit and vegetables, for example, carrots (≈95 cents/MJ) (Drewnowski & Specter 2004). These studies argue that “on a per calorie basis, energy-dense foods often cost less than energy-dilute foods” (Drewnowski 2004, p. 156). It is important to note however, that judging the cost of foods using measures based of energy cost have been questioned by a number of other researchers in the field (Burns et al. 2010; Frazao et al. 2011; Lipsky et al. 2011), primarily because of some mathematical issues around the relationship between energy density and energy cost. It has been suggested that using other validated methods to measure food costs, such as price per serve, are more useful ways of understanding the relative prices of healthy and unhealthy foods (Lipsky 2009)

The rising prices of healthy and unhealthy foods are another issue of concern. Several studies examining food prices at different time points in Australia, the UK and the USA have shown that relative prices of some healthy food items appear to be increasing over time compared to those of unhealthy items (Burns et al. 2008; Harrison et al. 2010; Monsivais & Drewnowski 2007; Monsivais et al. 2010; NCH Action for Children 2004; South Australian Council of Social Service 2011). Other studies have reported some similar price changes reported in healthy and unhealthy food groups (Christian & Rashad 2009; Kuchler & Stewart 2012). A recent Australian study that utilised Consumer Price Index data to examine food price trends between 1990 and 2011 demonstrated that the prices of three (out of four) healthy food groups rose more than average prices of all foods, and a combined and weighted index for all four healthy food groups rose 9% more than the average price
rise of all foods across that time period (South Australian Council of Social Service 2011). Other Australian studies either using similar data (Burns et al. 2008), or assessing the prices of ‘baskets’ of healthy and unhealthy foods over time (Harrison et al. 2010) have also shown prices of healthy foods have risen faster over time than unhealthy foods.

Some caution does need to be taken when interpreting findings of these price monitoring studies (Lee et al. 2013). Differences between the definitions of healthy and unhealthy foods, the selection of food items examined, different ways of measuring the cost of items (Carlson & Frazao 2012) together with other considerations such as changes over time in the quality and availability of fresh foods (Kuchler & Stewart 2012) make it difficult to draw broad conclusions about temporal changes in the relative prices of healthy and unhealthy foods from the present body of research.

Are food costs related to purchasing patterns of healthy and unhealthy foods?

Self-selected diets of higher nutritional quality have often been observed to be associated with higher costs than those of poorer quality. A range of studies have cross-matched data from nutrition surveys with price data from other databases to estimate the variation in the costs of self-selected diets. Several studies have found that diets that are lower in energy-density, and higher in nutritional value are more expensive on a cost per calorie basis (Andrieu et al. 2006; Darmon et al. 2004; Drewnowski et al. 2007; Maillot et al. 2007; Waterlander et al. 2010). Studies using other measures such as indexes of dietary quality (Schroder et al. 2006) also suggest that diets that cost more may be more nutritious (Bernstein et al. 2010; Cade et al. 2007; Rehm et al. 2011). But, while many diets that are healthier may cost more, it has also been shown that it is possible to attain healthy options while maintaining relatively low levels of food expenditure (Raynor et al. 2002).

There is emerging evidence that altering the relative prices of healthy and unhealthy foods is a promising way to improve the nutritional value of food-purchasing patterns. Laboratory based studies have shown that increasing the prices of both healthy and unhealthy food items decreases purchasing (Epstein et al. 2006; Epstein et al. 2007), but that increasing the prices of unhealthy foods is more promising than reducing prices of healthy foods in terms of improving overall nutritional quality of diets (Epstein et al. 2010). Price reductions on fruits and vegetables in a virtual supermarket environment have also been shown to increase
purchasing of those products (Waterlander et al. 2012). Real world studies have shown similar effects, with trials in small local settings such as school or workplace canteens indicating that monetary incentives to encourage the purchase of healthier items, can be effective in improving the nutritional value of food purchases (Wall et al. 2006). More recent, larger scale trials in real world supermarket settings have also shown that price discounts on healthy food items increase purchases of nutritionally recommended foods, and/or fruits and vegetables (Ni Mhurchu et al. 2010; Waterlander et al. 2013). However, when measuring purchases of specific nutrients, modest price discounts (12.5%) were not shown to have a significant effect (Ni Mhurchu et al. 2010).

The influence of economic resources on the nutritional quality of consumers’ food choices

As the vast majority of food must be purchased prior to consumption in western societies, examining the relationship between income and the food purchase selections made by individuals or households is a practical way to gain an insight into how the resources people have affect the nutritional value of their food choices.

Is income related to the nutritional quality of food purchases?

Several studies have investigated income differences in household purchasing patterns across a limited range of healthy and unhealthy food items. One study found that high income households purchased greater quantities of a range of healthy and unhealthy foods groups, and allocated proportionally more of their food expenditure to fruits and vegetables and packaged sweets and snacks, while lower-income households allocated more of their expenditure to sugar-sweetened beverages (French et al. 2010). Other studies that have examined food purchasing patterns in terms of regular versus recommended grocery items have found that higher income is consistently related to making choices in line with nutritional recommendations (Binkley & Golub 2011; Turrell et al. 2002).

To get a broader picture of the foods that are purchased by households, other studies have examined income-related patterns of food purchasing by examining population-level household expenditure data. Many countries, including Australia, regularly collect this kind of data. It has long been used to investigate the influence of income on broad food expenditure patterns (Houthakker 1957). More recently, this type of data has been utilised to explore trends in the nutritional quality of food purchasing patterns. Studies have investigated the food expenditure patterns of high-
and low-income households in Canada, the USA and Europe from a range of angles including: the quantities of foods and corresponding levels of nutrients purchased (Kirkpatrick & Tarasuk 2003; Ricciuto & Tarasuk 2007; Ricciuto et al. 2006); the quantities of food purchased in relation to the prices paid (James et al. 1997; Trichopoulou et al. 2002); relative expenditure allocated to various food groups (Stewart et al. 2003); and the overall nutritional quality of food purchases (Volpe & Okrent 2012). Studies using these methods have identified that in general lower-income households tend to: purchase fewer, or spend less on, healthy items such as fruits and vegetables and milk (Kirkpatrick & Tarasuk 2003; Ricciuto & Tarasuk 2007; Ricciuto et al. 2006; Stewart et al. 2003); purchase, or spend more on energy-dense foods such as fats and oils, cereals, potatoes and unhealthy ‘extra’ items (James et al. 1997; Ricciuto & Tarasuk 2007; Ricciuto et al. 2006; Trichopoulou et al. 2002); or have slightly less healthy food purchasing patterns overall (Volpe & Okrent 2012). Together, these findings indicate that there are some substantial income-related inequalities in household level food purchasing patterns at the broad population level.

Despite the regular collection of household expenditure data by Australia’s national statistical agency, the Australian Bureau of Statistics (ABS 2011), to date no Australian studies have used this data to investigate the relationship between household income and the nutritional quality of household food purchasing patterns. In this area more broadly, there is also limited evidence around how individual households across the income spectrum distribute their food expenditure between specific healthy compared to less healthy food groups. One small component of a study by Kirkpatrick and Tarasuk (2003) showed that lower-income households allocated a higher proportion of their food expenditure to some healthy food groups compared to higher-income households. However, no income differences were seen in the proportional allocation of expenditure to ‘other foods’, which contained all food items that did not fit in the four healthy food groups (i.e., energy-dense, nutrient-poor food items). Further research in this area could provide more insights into the complex relationship between income and food purchases of healthy and unhealthy foods, with analyses using more detailed healthy and unhealthy food groups being particularly warranted.
The combined influence of resources and the economic environment on the nutritional quality of food choices

Do costs, or perceptions of cost account for socio-economic differences in the nutritional value of food choices?

Several studies have examined the roles that either perceptions of the prices of healthy food, or perceptions of the importance of cost in food purchasing more generally may play in determining the nutritional value of food purchases. While one study has found an association between perceptions of the cost of fruit and vegetables and intakes of fruit and vegetables (Mushi-Brunt et al. 2007), several studies have used mediational analyses to examine how the perceptions of cost influence the relationship between socio-economic status and diet quality. The studies in this area are heterogeneous in terms of the measures used to record food habits and the measures of food cost perceptions. For example, some studies employ measures of diet quality (Beydoun & Wang 2008; Hupkens et al. 2000), while others examine fruit and vegetable intakes (Giskes et al. 2009; Inglis et al. 2008) and purchasing of nutritionally recommended grocery items (Giskes et al. 2007; Turrell & Kavanagh 2006). The findings from these studies are mixed with some studies showing that cost concerns do mediate the relationship between socio-economic status and the nutritional value of food choices (Beydoun & Wang 2008; Inglis et al. 2008; Turrell & Kavanagh 2006) while others do not (Giskes et al. 2007; Giskes et al. 2009; Hupkens et al. 2000). Given the inconsistency in the measures used in these studies, and their mixed findings, it is difficult to draw firm conclusions about the role that food cost concerns play in individuals’ food purchasing decisions.

Very recent studies have examined if either the levels of food spending, or the costs of specific diets mediate the relationship between income and the nutritional value of food choices. So far the results are mixed. One study has found that the costs of different diets (calculated from a standardised database) did mediate relationships between income level and measures of the overall healthfulness of diets in America (Monsivais et al. 2012), while an Australian study found that total food expenditure did not mediate the relationship between income and purchasing patterns of a range of standard and recommended grocery items (Miura & Giskes 2010). Another study using ACNielsen Homescan data, showed that lower levels of income were consistently related to purchasing of fewer healthier, compared to regular food items (Binkley & Golub 2011). This final study is particularly interesting as the researchers deliberately selected a range of regular and healthy food items with
negligible cost differences, and their findings therefore suggest that the relationship between income and the healthfulness of food purchases is very complex.

Strengths and limitations of the economic approach to understanding dietary inequalities

As demonstrated above, there is a substantial body of evidence which supports using an economic approach to understand nutritional inequalities in food choice behaviour. Moderate to strong evidence indicates that:

- Price is an important consideration in food choice, especially in low-income groups.
- Some healthy foods and diets are more expensive than less healthy options, meaning there are likely to be fewer healthy choices available at low cost.
- Prices of healthy foods may be rising faster than those of less healthy foods.
- Reducing the prices of food items may increase the likelihood that they are selected for purchase.
- There is an association between lower levels of income and increased purchasing of some foods with lower nutritional quality.

Together, these insights from the economic literature build a picture which suggests that there is a significant economic component to the mechanisms which produce inequalities in diet. However, while the evidence here is persuasive, only considering the mechanisms underlying these inequalities from an economic perspective, is a somewhat deterministic approach. Implicit in the discussion of the relationships between the costs and nutrition values of different foods, is the assumption that food price alone determines purchasing behaviour (Lipsky 2009). It is also suggested that individuals, in the context of low income will tend to choose the lowest cost food items available. These propositions, while on one hand rather elegant, fail to acknowledge the ways in which food products differ in ways apart from their monetary cost (Lipsky 2009), but also neglect to consider the rich socio-cultural contexts in which food purchasing decisions take place.

As research in this area progresses, the limitations that come from the deterministic nature of a purely economic approach for understanding nutritional inequalities in food choice are increasingly being acknowledged (Binkley & Golub 2011; Lipsky 2009; Volpe & Okrent 2012). Indeed, when discussing some of his most recent work, Adam Drewnowski (2012), one of the key researchers in this field,
pointed to some of his findings that showed some people can and do manage to secure healthy diets at low cost. He noted that this demonstrates that “it [is] not all about money” (p. 111) and we also need to investigate how other aspects of culture, lifestyle and attitudes affect the nutritional quality of food choices. This is not the first time that people living in difficult financial circumstances have been observed to secure healthy diets (see for example, (Crotty et al. 1992)), nor is it new to acknowledge that complex socio-cultural factors are powerful influences on food choice behaviour (Charles & Kerr 1988; DeVault 1991; Inglis et al. 2009; Power 2005b; Stratton & Bromley 1999). But, understanding how people’s financial resources together with both their socio-cultural and economic environments shape their choices around healthy and unhealthy foods, represents a significant gap in our current knowledge of income inequalities in diet.

In terms of the Australian context, the literature around economic approaches to understanding the production of inequalities in diets is also somewhat limited. A key pillar of the economic approach is that there is a relationship between individual, or household levels of financial resources and purchasing patterns of healthy and unhealthy foods. As demonstrated above, no studies to date have examined the relationship between income and purchasing patterns across a wide range of healthy and unhealthy food items in the Australian context. Although I have argued that a substantial weight of the literature in this area is devoted to investigating the factors associated with specific food choice patterns, the limitation is still of relevance to the current study. In seeking to understand more about the mechanisms which bring about socio-economic inequalities in diet, it is also important to first confirm whether inequalities in nutritional value of food purchasing patterns of high- and low-income households actually exist in Australia and to what extent.

In the next section, I consider some specific understandings developed from socio-cultural approaches to the study of food choice that are relevant to how and why inequalities in diet may develop. Following this, I explore how we might use insights from both the economic and socio-cultural approaches to work towards improving our understandings of the mechanisms that produce socio-economic inequalities in the nutritional value of food choices.
2.3.3 Socio-cultural meanings around food choice

There is a substantial body of knowledge building around how socio-cultural factors are thought to influence food choices (McMillan & Coveney 2010). While a full review of the socio-cultural literature around food choice is beyond the scope of the current review, there are some specific insights provided from this field which complement the economic approach to understanding how dietary inequalities might be produced and reproduced. This section therefore focusses on the importance of the socio-cultural contexts in which food choices are made, and the ways in which we ascribe meaning to foods for our food choice decisions. Other specific areas of the socio-cultural literature are also drawn on in the final section of this literature review (Section 2.4).

The contexts and meanings of food choices

Food choices always take place in the rich contexts of everyday life. Therefore, our food choice decisions are influenced by a range of complex socio-cultural factors, rather than being the consequence of a straightforward, rational decision-making process (Furst et al. 1996).

Eating food is often a social event which means that the social relationships that are inherent in our daily food experiences play an important role in the way that we choose foods (Sobal 2000). This complex social context of eating means that many food choice decisions are made at a group, rather than individual level (Sobal & Nelson 2003). Studies within family groups for example, have highlighted the complex ways in which our social relationships can shape food choices. As mentioned previously, both male partners (Charles & Kerr 1988; DeVault 1991) and children (Anving & Thorsted 2010; Dixon & Banwell 2004; Maubach et al. 2009; Turner et al. 2006) have been shown to have a substantial influence on the family food choice decisions that are, on the surface, made by women.

When we eat food we are not merely consuming nutrients, but we are consuming the meanings and symbols that we associate with particular foods (Beardsworth & Keil 1997). Our culture, or learned sets of knowledge and behaviours, prescribes particular meanings around particular foods, classifying objects at the most basic level as edible/inedible (Falk 1991) or more subtly as good/bad or healthy/unhealthy (Bisogni et al. 2012; Charles & Kerr 1988; Lupton 2005). The rich social contexts in which foods are bought, prepared and consumed are also integral to the ways in which we construct meaning around foods. For example, the family contexts, and the
role of the mother within the family have been shown to be central to meanings ascribed to the ‘family meal’ in modern Australian society (Maher et al. 2010b).

The specific socio-cultural contexts in which we make food choices are highly individual, and therefore there is scope for substantial variation in the ways in which different people perceive meaning around particular foods. The following sections outline some of the different ways in which individuals and groups have been shown to perceive the meanings around healthy and unhealthy foods, and perceive the cost, or prices, of different foods.

**Perceptions of healthy and unhealthy foods**

The terms ‘healthy’ and ‘unhealthy’ have clear meanings within the public health nutrition context. In many cases, these terms are employed to refer one or more aspects of the nutritional value of a food, such as its levels of salt, fat or sugar. These terms are also used to refer to the potential health effects that particular foods may have on the human body when consumed in certain quantities, for example, increasing risk of obesity, diabetes, heart disease or specific cancers. There are calls however, for public health definitions of healthy eating to take a more global view of food, and to also encompass biological, social and environmental aspects of the relationship between food and health (Hamelin et al. 2010).

The understandings held by laypersons of the meanings around healthy eating often move well beyond scientific, nutritional and medical understandings of the composition of foods, and the way foods affect human health. The contributions of qualitative research around people’s interpretations of healthy eating have been recently reviewed by Bisogni and colleagues (2012). These authors drew on a vast body of qualitative research to demonstrate that healthy eating is interpreted in a range of complex ways that reflect individuals’ personal, social and cultural experiences, as well as their environments. This review revealed that people draw on a wide range of sources of information about food and health, and often describe healthy and unhealthy foods in terms of their composition and ingredients, as well as in terms of the perceived effects of eating them. However, other concepts relating to healthy eating were also apparent in some groups, including concepts around a sense of balance, the contribution of food to mental and spiritual wellbeing, and negative connotations related to the taste or enjoyment of healthy foods. A number of studies in Bisogni’s review also showed that ideas around food and healthy eating were often wrapped up with moralistic notions. Foods were often described as being ‘good’ or
“bad”, but not always in line with nutritional definitions. For example, the moral meanings of food were sometimes constructed in relation to the social roles that individuals assumed around food, such as being a ‘good mother’, which some women tied to the act of providing the ‘right’ types of foods for their family (Bisogni et al. 2012).

Perceptions around food and health can also vary between groups of people who live in different countries or regions, or who have different cultural, ethnic or socio-economic backgrounds. Two studies have investigated how Australian consumers from different socio-economic backgrounds perceive issues around food and health, and are therefore particularly relevant to the current study. The first of these studies investigated how perceptions of risk and safety around food (including those related to health) influenced everyday food choices of a diverse group of Australians (Lupton 2005). In that study, concerns about dietary fat and unnatural additives were particularly pertinent to consumers’ understandings of food, risk and health. There was some variation in the concern expressed around maintaining a healthy diet by highly- and less-educated participants, with young participants with low levels of education expressing the fewest concerns about food risks and health. A range of discourses which guided food choice decisions emerged from Lupton’s study. Particularly of note were the moral notions of ‘trying’ to eat the ‘right’ foods and ‘controlling’ what family members ate that were embedded within the meanings perceived around different foods.

Another Australian study highlighted important differences in the ways that parents from high- and low-income backgrounds perceived meanings around food and health (Coveney 2007). When discussing the diets of their children, parents from high-income suburbs discussed foods and health by using scientific medical and nutritional terminology, often the describing nutritional values or components of specific foods or concerns around particular health risks associated with the consumptions of some foods. On the other hand, parents from low-income suburbs discussed foods in more general terms tending to draw on ideas around the functional effects of food (such as helping children to grow, or be free from illness) or the relationship between children’s diets and their outward appearance.
Perceptions of the cost of foods

When making food choice decisions, the monetary cost of food items are not perceived in isolation. Rather, they are perceived in relation to other attributes of the food item and a range of other considerations. Family preferences, time required for purchasing and preparing healthy foods and the quality of the fresh foods available have all been shown to be important factors that influence family food choices in addition to food budgets (Maubach et al. 2009; Wiig & Smith 2009). Indeed, a quasi-experimental study investigating the influences on healthy food purchases made by Australian women found that while the money available to buy food is important, it was not the sole predictor of less healthy diets being selected by low-income women (Inglis et al. 2009).

The ways that consumers balance food cost with other factors when choosing food is demonstrated by a key study in the sociological food choice literature that used in-depth qualitative work to construct a model of the food choice process (Furst et al. 1996). At the heart of this model lies the ‘personal food system’, where the cost of food is considered together with other key factors. The personal food system represents the mental processes used by people to translate influences on their food choice into how and what they eat in particular situations (Connors et al. 2001; Furst et al. 1996). Cost is identified as one of five key factors that are almost always considered in food choice decisions. The others are taste, convenience, health and managing relationships. A key process that is illustrated by this food choice model is that the way in which these factors are weighed, balanced and traded-off every time a consumer makes a food choice. Importantly, the factors may be weighed up differently depending on the characteristics of that particular food choice occasion. This work once again demonstrates that cost is indeed an important factor in food choice, but is by no means the only factor.

The ways in which consumers balance cost with other considerations in their food purchasing processes is captured by the concept of value. An Australian study that qualitatively investigated consumers’ thought processes as they shopped for fruits and vegetables, revealed that consumers’ perceptions of the overall value of a food item were more important in purchasing decisions than the item’s price (Owen et al. 2002). Owen and colleagues describe how this notion of value represents the outcome of the customer weighing up the price of an item with other attributes such as the quality of the item, the consumer’s perception of an acceptable price, the prices of the item in comparison to other items and how much the item is wanted/
needed at that time. Owen and colleagues (2002) concluded that due to specific ‘usage characteristics’, some items would not be purchased no matter how low the price, but other items would be purchased regardless of a high price. This study supports the idea that food shoppers weigh up the price of an item with other factors when making their food choices. The key contribution of this Australian study is that a consumer’s own perception of the value offered by a food item can be understood as an outcome of this weighing-up process, and that this, rather than price alone, will determine whether or not that item is purchased.

2.4 ‘Consumer value’ as a conceptual tool to investigate the mechanisms that produce dietary inequalities.

As demonstrated above, both economic and socio-cultural factors shape food choice decisions and both are therefore likely to be important in the production and reproduction of socio-economic inequalities in diet. The consideration of these two somewhat separate bodies of literature together raises an important question: How might we investigate the ways in which economic factors influence food choices while also taking into account some important socio-cultural factors?

This thesis proposes that exploring the concept of consumer value in the context of healthy and unhealthy foods is a useful way to improve our grasp of the mechanisms that produce and reproduce socio-economic inequalities in diet. This final section of this literature review outlines in more detail, what is meant by the term consumer value, and how it has been utilised in the food choice and public health literatures to date.

As consumer value is central to the academic and practical disciplines of marketing, I first provide a description of this concept from a marketing perspective, before moving on to consider how the fields of economics and sociology have understood this notion. A framework for conceptualising consumer value is presented that encompasses both economic and socio-cultural factors that are thought to influence purchasing decisions. I then return to the food choice literature to examine the relevance of this framework to current understandings of food choice, and thus its potential as a tool for exploring the mechanisms that underpin socio-economic inequalities in diet. Finally, I briefly examine how the concept of value has been considered to date in public health understandings of food choice inequalities.
2.4.1 What is consumer value?

**Insights from the field of marketing**

The concept of consumer value, or value for money, is a central concept in marketing. Marketing aims to maximise consumer value in order to secure sales of their particular product and therefore produce a profit (Perreault & McCarthy 2002). While the key motivations of marketing and public health are very different, using the conceptualisation of this term developed in the marketing field may help to further public health’s understandings of food purchasing behaviours.

Consumer perceptions of the value for money offered by a food item are commonly mentioned in the marketing literature, but the topic was thoroughly investigated by a landmark study by Zeithaml (1988). His work shows that perceptions of value vary between different consumers, and that an individual consumer may conceptualise the value for money of an item differently depending on the purchasing situation. However, Zeithaml also demonstrates that there are similarities in the ways that consumers perceive value when making purchases. Some examples of different ways that consumers conceptualise value for money are:

“Value is low price.”

“Value is whatever I want in a product.”

“Value is the quality I get for the price I pay.”

“Value is what I get for what I give.” (Zeithaml, 1988, p. 13)

The commonality in these responses is that judging value is always a process of balancing what is given and what is received. The differences in particular perceptions of value are due to the specific factors considered on either side of this equation, and the relative importance of these to the individual consumer. Some consumers may prioritise high volume, others quality and others still convenience. In terms of what is given, some people may be most concerned with how much money is spent, but for others the time and effort required to obtain the item is the main concern (Zeithaml 1988). So, from a marketing perspective, we can understand that consumers may consider different factors and prioritise them differently when making purchasing decisions, but they are always balancing what they get against what they must give.
An interdisciplinary framework to conceptualise consumer value

With a clear understanding of the way that consumers conceptualise value for money from the marketing perspective, I now look to the economic and sociological literature to see how this concept is understood. The idea that the value of an item for sale has more than one component is not new in the field of economics. Economists have long described the ‘exchange value’ and ‘use value’ of an object (Smith 1993). The study of consumption from a sociological perspective has more recently added the component of ‘identity value’ to this conceptual framework (Warde 1997).

These three components of value, which can be seen to form a framework for consumer value, are defined below. The following sub-sections outline how each of these separate components is reflected in the food choice literature in order to demonstrate the applicability of this conceptual framework to understanding how people make their everyday food purchase decisions.

Exchange value and use value

The first two components of consumer value are the exchange value and the use value of an item. The idea that an item can have both an exchange value and a use value is discussed in the works of renowned economists such as Adam Smith (1993) and Karl Marx (Wolff 2002). Smith explained these concepts in the following passage that was first published in 1776:

“The word VALUE, it is to be observed, has two different meanings, and sometimes expresses the utility of some particular object, and sometimes the power of purchasing other foods which the possession of that object conveys. The one may be called ‘value in use’ the other ‘value in exchange’. The things which have the greatest value in use have frequently little or no value in exchange; and, on the contrary, those which have the greatest value in exchange have frequently little or no value in use. Nothing is more useful than water; but it will purchase scarce any thing; scarce any thing can be had in exchange for it. A diamond, on the contrary, has scarce any value in use; but a very great quantity of goods may frequently be had in exchange for it.” (Smith, 1993, p. 34-35)

Thus, exchange value can be thought of as comprising of both the monetary cost of an item in an exchange and any non-monetary costs that are incurred in obtaining the item. The use value of an item can be considered to be anything that the purchaser
deems the product to be useful for. For food, the use value of a food item could be its potential to meet a person’s biological needs, such as satiating hunger and nutritional requirements, but also to meet more complex emotional and socio-cultural needs.

Identity value

The third component of the perceived value of an item is its identity value. Sociologist Alan Warde (1997) added this component to the traditional economic components in his discussion of how theories of consumption apply to food. The marketing literature also acknowledges the importance of identity to the value of a product (Desmond 2003). Warde proposes that there are three ways in which a person can use the consumption of food to express their identity. The first is by demonstrating their place in society, that is, hierarchical distinction. This draws largely on the work of Veblen (1973) and Bourdieu (1984), who theorised how a person’s ‘taste’ or choice of consumer goods, including food, is one way that he or she can signify his or her position in the social hierarchy. The second way that food can express identity is by demonstrating membership of a particular group. Finally, the way in which identity is conveyed through food can also be narcissistic in purpose, that is, a consumer uses their choice of food to add to their perception of their self-identity or self-image. These three ways in which food can be used to express identity help to understand how consumers perceive value of food items.

2.4.2 How does consumer value influence food choice decisions?

Qualitative studies investigating food choices, particularly those from socio-cultural perspectives, support the importance of these three elements of consumer value in food choice decisions. While no studies have set out to examine all of the components of consumer value at once, the three components of consumer value can be identified in the findings of many food choice studies. Without using these labels explicitly, a range of studies point to how perceptions of exchange value, use value and identity value may influence food purchases or food choices and how their influence may vary depending on the consumer characteristics and the types of foods being considered. A thorough review of this literature is beyond the scope of the current review, but some important examples of these findings in relation to food choice are outlined below.
Chapter 2 - Literature review

**Exchange value**

**Monetary costs**

As discussed previously, the majority of food shoppers give some consideration to the price of foods, but monetary costs seem to have greater weight in the food purchasing decisions of low- compared to high-income food purchasers (Glanz et al. 1998; Inglis et al. 2005; Inglis et al. 2009; Lennernas et al. 1997; Steenhuis et al. 2011). Qualitative studies have also found that for low-income families food is often seen as the one area of the household budget that is flexible (Burns et al. 2013), and in hard times less money may be spent on food in order to meet other unexpected bills (Dobson et al. 1994).

**Non-monetary costs**

Non-monetary costs of food include factors that contribute to the accessibility of food items. The physical accessibility that consumers have to food retailers (in terms of distance, available modes of transportation, physical capacity of consumers, time taken to travel) and the availability of different food types within the retail outlets (healthy versus non-healthy) are key aspects of food access. While access to healthy foods is reduced for low-income groups in the USA, access to healthy foods seems to be relatively equitable in other countries such as Australia (Cummins & Macintyre 2006). There are, however, inequalities in access to unhealthy take-away foods in Australia, with these foods being more accessible in low-SES areas (Burns & Inglis 2007; Cummins & Macintyre 2006).

Another key non-monetary consideration in food purchase decisions is the time taken to purchase or prepare different food products. Factors such as work and family commitments and lower levels of income are thought to negatively impact on time available for food related tasks (Jabs & Devine 2006). The complex relationship between time scarcity, income and health inequalities is beginning to be recognised in a range of areas, including healthy eating (Strazdins et al. 2011). For example, one American study has shown that the time requirements of preparing the recommended healthy, low-cost ‘Thrifty Food Plan’ are greater than the time that low-income workers and single parents might reasonably be able to allocate to food preparation tasks (Rose 2007).
Use value

In terms of the use values of food, food choice studies have shown that household food purchasers are often most focused on providing adequate quantities of acceptable foods for their families (Stratton & Bromley 1999), but that they also consider the characteristics of the foods purchased, including their quality, taste and healthfulness (Barker et al. 2008; Inglis et al. 2005). Additionally, foods are often considered in terms of their functional role, that is whether they are to be consumed as meals, snacks or treats (Dobson et al. 1994; Sobal & Bisogni 2009). These considerations are important in ensuring that chosen foods meet the desires and expectations of partners and children (Barker et al. 2008; Charles & Kerr 1988; DeVault 1991; Stratton & Bromley 1999).

Examples of other more abstract use values of food in family situations include using foods to express love (Kaufman & Karpati 2007), as a tool to control children’s behaviour in difficult situations (Noble et al. 2007), as a way of bringing the family together (Ahye et al. 2006) or as a way of marking particular social occasions including birthdays, other special occasions or even just the end of the week (Husby et al. 2009). Thus, the use values of food go beyond meeting physiological needs to include meeting social and emotional needs.

The likelihood of food wastage can also be considered under the heading of use value, but naturally the potential for waste is a negative use value and would discourage purchase. Low-income food shoppers in particular may be reluctant to experiment with new foods because of the potential risk of novel food items being rejected and wasted (Burns et al. 2013; Dobson et al. 1994).

Identity value

A range of studies have shown that different foods have identity values, and, as suggested by Warde (1997), that the foods people purchase or consume can be used to mark them as different from others, indicate membership of a group or contribute to a person’s self-identity. Historically the work of Veblen (1973) and Bourdieu (Bourdieu 1984) identified that different ‘tastes’ in food consumption exist between the higher and lower social classes. In more recent times, different social classes have also been shown to have different taste in food. For example, in the UK eating out at ‘posh’ establishments, such as French restaurants, is preferred by higher classes, while lower class groups prefer ‘take-aways’ such as fish and chips, burgers or Chinese food (Bennett et al. 2009). Grocery purchases can also carry connotations
of social status. Very low-income food purchasers may feel a sense of embarrassment and social exclusion when their limited food budgets mean they rely on generic rather than branded products or shop at low-cost rather than mainstream food retail outlets (Hitchman et al. 2002). In a study from the UK, this was particularly an issue for low-income mothers when preparing their children’s school lunchboxes. Some food items that were identifiable as being from low cost retailers were felt by mothers to indicate their families economic position to others, with the items described by mothers as being a “badge of poverty” for their children (Hitchman et al. 2002, p. 31).

Food has a particularly strong role in contributing to the identity of different ethnic or cultural groups. For immigrants, food is an important instrument in maintaining cultural identity when they move to a new country (Jonsson et al. 2002). Some African Americans perceive eating healthily as giving up part of their cultural heritage and trying to conform to the dominant culture (James 2004). At a smaller group level, food habits have been shown to contribute to the construction of family identity (Moisio et al. 2004). Food can also be used to symbolise belonging to a particular social group by consuming foods that fit in with the perceived social norms of that group. In a Canadian study with low-income families, the purchase and consumption of food items such as pizza and hotdogs were seen as important ways to help children to fit in with their peers (Power 2005a). In contrast, a study in the UK of middle class families found that some parents were happy for their families to eat at fast-food restaurants, but they did not want to be seen by others to be taking their children to those restaurants (McVittie et al. 2008).

Several studies have illustrated the ways in which food can add to a person or group’s self-identity. Sociological studies have demonstrated that care-taking roles are associated with food-management responsibilities (Ahye et al. 2006). For example, food and cooking are used as ways of emotional care-giving and in constructing identity as a ‘proper mother’ (Warin et al. 2008) and feeding children can symbolise nurturing, achievement and good parenting (Kaufman & Karpati 2007).
2.4.3 The concept of consumer value in the public health nutrition context

Perceptions of value, or value for money have been mentioned in the public health nutrition literature as a potential influence on individual’s food choices (Baines 1979; Ball et al. 2009; Dobson et al. 1994; Foley & Pollard 1998; Steenhuis et al. 2011). However, the meaning of value in this context has only sometimes been explored. Studies that have provided a definition of value for money demonstrate that this term may have several different meanings. For example, from a health worker’s perspective, the value for money offered by different foods has been conceptualised as the price of a food item compared to its weight and/or nutrient value (Baines 1979; Foley & Pollard 1998). However, it is acknowledged that this particular construction of value may not be how consumers themselves perceive value for money, as they may instead seek to purchase foods that meet the other desires of their families’ and perhaps free up their time (Baines 1979).

As discussed previously, some models of food choice have explicitly discussed the process of assessing value, or weighing up a range of considerations including the cost, meanings and other attributes of food items (Furst et al. 1996; Glanz et al. 1998; Sobal & Bisogni 2009). Some empirical studies have also described similar processes (Burns et al. 2013; Hammond & Chapman 2008). However, only a few studies in the public health literature have mentioned how consumers themselves actually describe their perceptions of the value, or value for money, offered by different food items (Burns et al. 2013; Hammond & Chapman 2008; Hill 1998; Hitchman et al. 2002). To my knowledge, no studies to date have examined the ways in which consumers from diverse socio-economic backgrounds construct their perceptions of value across wide range of both healthy and unhealthy foods.

2.5 Chapter summary

The current literature review has provided an overview of how food choice has been conceptualised, and the different disciplinary approaches that have sought to understand it. It has been demonstrated that food choice is a significant issue in the field of public health, given the increasing rates of diet-related disease, and in particular in the context of socio-economic inequalities in diet-related health outcomes. I have argued that our current understandings of the mechanisms that produce inequalities in diet are limited, which poses a significant obstacle to the design and implementation of effective public health policies and interventions.
The economic approach to inequalities in the nutritional value of food choices has been examined in-depth, as it is a major area of research through which public health nutrition has been working towards improving our understanding of the mechanisms underlying socio-economic inequalities in diet. This body of evidence has demonstrated that there are important associations between the nutritional value of foods and their monetary costs, which appear to have an impact on the purchasing decisions made by consumers, particularly in contexts of low income. However, there has been limited investigation to date around the relationship between income and the purchasing patterns of healthy and unhealthy foods in the Australian context. The evidence in this area is also limited in the way that it tends to consider the economic factors influencing food purchasing decisions with only limited reference to the complex socio-cultural contexts in which they take place.

Given these limitations, the current study aimed to improve our understanding of the mechanisms which produce and reproduce socio-economic inequalities in the nutritional quality of food purchases by exploring how both economic and socio-cultural influences may be acting together.

Therefore, the overarching research question that guided this study was:

*How do economic and socio-cultural factors contribute to the production and reproduction of socio-economic inequalities in the nutritional quality of food purchases?*

The specific approach to answering this broad research question was guided by two further research questions, which were developed in line with the gaps identified in the literature:

*What is the relationship between household income and purchasing patterns of healthy and unhealthy grocery foods in Australian households?*

*How do high- and low-income Australian consumers perceive value in healthy and unhealthy foods when they shop, and what role do the considerations of monetary cost and nutritional value play in these perceptions?*
Chapter 3
Mixed methods study design

3.1 Chapter overview

The current study aimed to improve our understandings of the mechanisms which bring about socio-economic inequalities in dietary quality, by investigating how both economic and socio-cultural factors influence food purchasing habits. In order to fulfil this aim, I employed a mixed methods research design, that is I using both quantitative and qualitative methods within this study to gain a better understanding of the overall research problem (Greene 2007).

This chapter outlines how quantitative and qualitative methods, with their contrasting theoretical perspectives, were combined within this study. I discuss the purpose for employing a mixed methods approach and provide an overview of the specific objectives and methods utilised in the two distinct phases of this study. I then describe the mixed methods study design used and how it was developed. The chapter concludes with a brief discussion of how issues around maintaining research quality were addressed throughout this study.

3.2 What is mixed methods approach?

In quantitative research, researchers are guided by realist and objectivist ontologies and an empiricist epistemology (Sarantakos 2005). This means that the real world is considered to exist, and is directly knowable (Garwood 2006). Human beings are seen as rational actors, whose behaviour is shaped by external causes in consistent ways, and all people are thought to perceive reality in the same way because they see, name and prescribe meaning to objects in uniform ways (Sarantakos 2005). As such, quantitative research methods tend to collect data in either numerical form or non-numerical form which is later converted to numbers for comparison and statistical analysis (Garwood 2006). A key strength of using quantitative methods is the ability to measure the responses of a large number of people to a limited set of questions, giving a broad and generalisable set of findings which can be presented succinctly (Patton 2002).
Qualitative research encompasses a diverse field of theory and practice (Sarantakos 2005) and there have been heated debates between qualitative researchers around issues fundamental to qualitative research, such as philosophical assumptions and the nature of data, as well as how data should best be collected, analysed and presented (Guest et al. 2013). In contrast to quantitative research, the central principles of qualitative research draw on those from a relativist orientation, a constructivist ontology and an interpretivist epistemology (Sarantakos 2005). This means that qualitative researchers consider reality to be subjectively constructed by individuals, and therefore perceived differently by different people. They consider human beings to be active creators of their worlds, and that patterns and regularities in behaviour emerge as a result of social conventions which are established through interactions between different people (Sarantakos 2005). Qualitative research therefore focusses on the ways that social events and phenomena are understood by individuals. It also explores the subjective meanings through which people interpret their worlds and the ways in which reality is constructed in particular contexts (Sumner 2006). Qualitative research involves collecting and/or working with text, images and/or sounds (Guest et al. 2013) and often takes a more flexible and fluid approach to the research process than those of quantitative studies (Liamputtong 2013). Qualitative methods allow for the exploration of issues in depth and detail, but given their focus on a relatively small number of cases or situations this strength is often thought to be counterbalanced by a reduction in the generalisability of findings (Patton 2002).

In mixed methods research, a variety of quantitative and/or qualitative methods are employed within one study. Mixed methods is a young and developing field of research. As such, even amongst leading mixed methods researchers consensus has not yet been reached around key issues, including what does or does not constitute a mixed methods study or program of research (Johnson et al. 2007; Leech 2010; Teddlie & Tashakkori 2010). For the purposes of this study, I have drawn on Tashakkori and Newman’s (2010) definition of mixed methods as:

“A type of research design in which the findings of qualitative and quantitative methods/approaches are integrated in order to gain a fuller understanding of the phenomenon under investigation.” (p. 514)

Philosophical discussions about combining quantitative and qualitative research paradigms have previously drawn attention to the different epistemological and ontological assumptions that underpin these two approaches and their associated
methods (Brannen 2005; Bryman 2006a). However, there now seems to be strong support for working both quantitatively and qualitatively (Brannen 2005) with the largely pragmatic attitudes within social research disciplines bringing an end to what had been termed the ‘paradigm wars’ (Bryman 2006a; Johnson & Onwuegbuzie 2004). Thus, mixed methods researchers acknowledge that both quantitative and qualitative methods possesses specific qualities that make each of them suitable for most effectively studying particular aspects of reality (Sarantakos 2005).

An important issue that faces all mixed methods researchers is how to successfully combine the often contrasting assumptions that underpin qualitative and quantitative research methodologies. Researchers may take range of conceptual stances in order to do this successfully (Creswell & Plano Clark 2011; Greene 2007; Teddlie & Tashakkori 2010). In this study I assumed a ‘complementary strengths’ conceptual stance in order to mix the underlying assumptions of the quantitative and qualitative methodologies used. As Greene (2007) explains, a researcher taking such an approach sees the assumptions that underpin the quantitative and qualitative phases of study as being different in important ways, but compatible. The practical decisions that are made within each phase of the study are guided by the relevant quantitative or qualitative assumptions, and the phases are kept largely separate in order to the maintain their paradigmatic and methodological integrity (Greene 2007; Teddlie & Tashakkori 2010).

The remainder of this chapter outlines the specific purposes for using mixed methods in the current study and discusses the details of the mixed methods study design used.

3.2.1 Why use a mixed methods approach in this study?

Mixing both quantitative and qualitative methods within one study or program of research is challenging. Given this, employing a mixed methods study design should only be undertaken when there is a specific reason to do so (Creswell & Plano Clark 2011).

For the current study, the research questions guided my decision to use a mixed methods approach. The overarching research question asked: How do economic and socio-cultural factors contribute to the production and reproduction of socio-economic inequalities in the nutritional quality of food purchases?. This question did not in itself dictate or suggest a particular methodological approach. This research
question is therefore a ‘mixed’ research question (Tashakkori & Creswell 2007) as it holds potential for the development of more detailed quantitative and/or qualitative research questions.

As explained in Chapter 2, two more specific research questions were derived from specific gaps identified in the current literature. These questions more clearly pointed towards specific methodologies.

The first detailed research question asked about the relationship between household income and the purchasing patterns of healthy and unhealthy foods in Australian households. This question was developed to ascertain a broad picture of the relationship between income and the nutritional quality of food purchasing patterns in Australia. Given this question’s deductive nature, its focus on the relationship between specific variables and the emphasis on describing broad patterns of behaviour, it was best answered using a quantitative methodology (Plano Clark & Badiee 2010).

The second detailed research question asked how high- and low-income consumers construct their perceptions of value around healthy and unhealthy foods as they do their shopping. This question sought to explore whether different ways of perceiving value in healthy and unhealthy foods might help to explain how economic and socio-cultural factors contribute to the production of socio-economic inequalities in food purchases. Given the inductive nature of this question and it focus on individuals’ perceptions of foods, it was best answered using a qualitative methodology.

Quantitative and qualitative methods were employed in this study to investigate different aspects of how economic and socio-cultural factors contribute to dietary inequalities. Thus, the primary purpose of using mixed methods in this study was for expansion (Greene 2007; Greene et al. 1989), with the two different methodologies increasing the breadth, scope and range of the inquiry. Specifically, the quantitative phase sought to examine the relationship between economic factors and broad food purchasing patterns of healthy and unhealthy foods, while the qualitative phase sought to understand how both economic and socio-cultural factors might lead to these patterns being produced.

A mixed methods approach was also employed in this study for complementarity (Greene et al. 1989) as the quantitative and qualitative phases of this study were devised to examine separate but overlapping aspects of the economic and socio-
cultural influences on food purchasing patterns, with a view to building an enriched understanding of this issue. In particular, it was intended that the relationship between income and food purchasing patterns that were examined at a broad ‘macro’ level (Creswell et al. 2011) in the quantitative phase, would be complemented by the more in-depth explanations of food choice decisions that would emerge from the qualitative investigation of food choice decisions at a ‘micro’ level (Creswell et al. 2011). In this way, the qualitative research phase aimed to provide a contextual understanding of the broad patterns identified in the quantitative phase (Bryman 2006b).

3.3 Study design

There is a plethora of mixed method research designs in existence, and multiple typologies have been developed in an attempt to simplify researchers’ design choices (Leech & Onwuegbuzie 2009). The design used in the current study is best described as an ‘extension component design’ (Greene 2007), as this reflects both the type of design and its purpose. However, the mixed methods design could also be more simply described as a ‘concurrent’ (Creswell & Plano Clark 2011; Leech & Onwuegbuzie 2009) or ‘parallel’ mixed methods design (Tashakkori & Newman 2010) according to other major typologies that exist within the literature.

The specific attributes of the component design used in this study were developed in response to the research purposes and questions (Leech & Onwuegbuzie 2009) together with practical considerations (Greene 2007). Some, but not all decisions regarding the mixed methods design were made upfront, meaning the design was in part ‘fixed’, and in part ‘emergent’, which is common in mixed methods research (Creswell & Plano Clark 2011; Tashakkori & Newman 2010). While the overall research purpose and question were the primary considerations when designing this study, in many cases practical considerations, such as the limitations of time and resources available to me as a doctoral student working as the sole researcher on this study, also had a bearing on study design decisions.

The following sub-sections describe the process of designing the current study. These sections are organised according to the order in which study design decisions were made, as the earlier decisions influenced subsequent ones.
3.3.1 Data sources

The data sources used in this mixed methods study were determined early in the study planning phase and shaped many of the other design decisions. Given its exploratory nature, it was clear that collecting my own qualitative data would be essential to adequately address the qualitative research question. Collecting my own data would enable me to focus the qualitative inquiry specifically on consumer perceptions of value around healthy and unhealthy foods, to ensure I captured the perspectives of both high- and low-income consumers and explore any unanticipated findings generated in the early stages of the inquiry.

Having decided to collect my own data for the qualitative phase, the main decision I faced about the data source for the quantitative phase was whether I would also try and collect my own data in order to answer the first research question, or whether I would use an existing dataset. While collecting my own data would offer some distinct advantages, including control over the ways that data around the key variables of income and food purchases were recorded, it also had significant drawbacks such as having the potential for only achieving a relatively small sample size and taking significant time and effort to collect, which would diminish the time available for the collection and analysis of the qualitative data.

As discussed in the literature review, I was aware that household expenditure studies had been used for previous research examining food purchasing patterns in other countries, but to date there were no comparable studies in Australia. The ABS has conducted a Household Expenditure Survey (HES) approximately every six years since 1974. The latest round of this survey contained detailed information about household expenditure for nearly 7000 households, including that allocated to over 100 different categories of food and beverages. As a student researcher, the HES dataset was easily accessible through the ABS. Given congruence of this secondary data source with my research questions, the large sample size and the time savings offered by using a pre-existing data set, the HES was selected as the data source for the quantitative phase of this study.
3.3.2 The two distinct research phases

Phase I- An analysis of the Household Expenditure Survey

The first research question, that guided the quantitative phase of this mixed methods study, was:

What is the relationship between household income and purchasing patterns of healthy and unhealthy grocery foods in Australian households?

As described above, the ABS HES was analysed in this quantitative research phase. In order to answer this research question, the following objective was developed:

Objective 1a: To examine the relationship between household income and the allocation of food expenditure between healthy and unhealthy grocery foods in Australian households

A second research objective was also developed as the quantitative research phase was in progress. This second objective was required to narrow the focus of the quantitative phase to be more in line with that of the qualitative phase, and therefore improve the potential for the results from the two phases to be integrated. As will be fully explained later, the sample for the qualitative phase of research was relatively small (n=22), and it was planned that mothers from households with primary school children would be the target population. It is important to align the units of analysis between the two phases of this mixed methods study (Yin 2006), therefore households containing primary school-aged children were also made a secondary focus of the quantitative phase of this study. Thus, the following research objective was developed for the quantitative phase:

Objective 1b: To compare the relationships that exist between household income and the ways in which food expenditure is allocated to healthy and unhealthy grocery foods between all Australian households and those containing primary school-aged children.

The analytic method for the ABS HES data was designed in order to fulfil these two objectives. In brief, variables were created from those in the HES dataset which reflected the main variables of interest (income and food expenditure on healthy and unhealthy foods) and a range of co-variates (such as those representing the composition of households or the level of education of the occupants). A series of statistical analyses were then undertaken in order to examine the patterns of expenditure on healthy and unhealthy foods in relation to household income in all
households, and in a sub-sample of those that contained primary school-aged children.

A comprehensive description of the methodology and methods employed in this quantitative phase of the study are provided in Chapter 4.

Phase II- Qualitative interview study

The second research question, which guided the qualitative phase of this mixed methods study, was:

*How do high- and low-income Australian consumers perceive value in healthy and unhealthy foods when they shop, and what role do the considerations of monetary cost and nutritional value play in these perceptions?*

As described above, I planned to collect my own qualitative data in order answer this research question. The qualitative phase of this study targeted mothers from households which contained at least one primary school-aged child (see p. 95 for a full rationale). Therefore, the following two objectives were developed for this qualitative phase:

*Objective 2a: To describe how mothers of primary school-aged children perceive value when shopping for food items, and how considerations of monetary cost and nutritional value feed into these perceptions.*

*Objective 2b: To compare and contrast the ways in which mothers of primary school-aged children from high- and low-income backgrounds perceive value in food items, particularly in regards to the considerations of monetary cost and nutritional value.*

In order to answer the qualitative research question and objectives, one-to-one semi-structured interviews were conducted with mothers from households containing primary school-aged children. Information was gathered about these mothers’ everyday food shopping experiences and their perceptions of a range of healthy and unhealthy foods. Participants were recruited from both low- and high-income areas of Melbourne in order to obtain the views of mothers from a range of income backgrounds. Data were analysed in two stages. A primary descriptive analysis was conducted to explore how mothers broadly constructed their perceptions of value around different foods. A secondary analysis was also undertaken in which I drew on existing social theories in order to explain how considerations of monetary cost and nutritional value contributed to perceptions of value, and how these perceptions were socially patterned within the participant sample.
A full description of the methodology and methods employed in this qualitative phase of the study are provided in Chapter 5.

### 3.3.3 Developing the mixed methods study design

Once the objectives and methods for each of the research phases had been planned, the next step was to determine how the phases would be combined within a single study. This section describes the details of the mixed methods design used in the current study, by drawing on the three dimensions of mixed methods research designs as described by Leech and Onwuegbuzie (2009). These dimensions (level of mixing, time orientation and emphasis of approaches) help to define the relationship between the quantitative and qualitative research phases in the current study, that is, how exactly these two phases fit together. Figure 3.1 below presents a diagram illustrating the mixed methods study design.

![Diagram](image.png)

**Figure 3.1: The mixed methods study design**
**Level of mixing**

In mixed methods studies, the qualitative and quantitative phases can be either independent or interactive. Specifically, the research questions, data collection, data analysis and interpretation processes aligned with each phase can be kept completely separate, or there may be some direct interaction prior to the final integration of the results (Creswell & Plano Clark 2011; Greene 2007).

The two phases of the current study, while working towards answering the same overarching research question, were kept independent until the final stages of the study. Thus, the study design here can be described as a ‘component’ (Greene 2007) or ‘partially mixed’ design (Leech & Onwuegbuzie 2009). As explained above, the specific research questions and methods of data collection were developed separately for each phase. The data collection and analysis processes of each phase were also conducted separately, with little interaction between the two phases. The findings of each phase were first interpreted on their own, and then brought together to develop the mixed methods inferences in the final stage of the research process.

**Time orientation**

The time orientation of a mixed methods study is defined according to the way in which the the quantitative and qualitative phases are synchronised (Morse & Neihaus 2009). As described above, the quantitative and qualitative phases were conducted independently, without either phase feeding into the processes of data collection or analysis of the other, and therefore, time orientation of this study is best labelled as ‘concurrent’.

However, in chronological terms, the phases of this study were conducted sequentially, instead of strictly at the same time. The reasons for this were largely logistical (Morgan 1998). As a single researcher, acquiring new skills, it worked well to tackle each phase in turn. With the data for the HES analysis being readily available, I began working on the quantitative phase early in the research process. The initial tasks required for the qualitative phase (such as planning the data collection processes and gaining ethics approval) were commenced once the quantitative phase was well under way. But, the qualitative phase then continued for a substantial period of time after the quantitative phase was completed (see Figure 3.2).
Emphasis of approach

The emphasis of approach in a mixed methods study refers to whether both qualitative and quantitative phases of the study are given approximately equal weight in terms of addressing the research question, or whether one phase is given significantly higher priority than the other (Leech & Onwuegbuzie 2009). A mixed methods study should use either quantitative or qualitative methods as a principle, or dominant methodology if the strengths of one or other approach are more relevant to the overarching aim of the study (Morgan 1998; Morse et al. 2006).

In this study the qualitative phase was given more emphasis than the quantitative phase. The overarching aim of this study, to improve our understanding of the mechanisms which bring about socio-economic inequalities in diet, can be
understood to be more inductive in nature than deductive, as it was seeking to explore new ideas rather than to test existing theories (Morse et al. 2006). This meant that strengths of qualitative methods were most relevant to the overarching aim, and it was suitable to use them as the principle, or dominant methodology within this study. In this context, the quantitative phase can be seen to have a set of strengths that complement those of the qualitative phase (Morgan 1998), and therefore add to the study design’s overall ability to fulfil the aim.

In practical terms, this emphasis on qualitative methods meant that more time and effort was devoted to conducting the qualitative phase in comparison to the quantitative phase. In addition, greater weight was given to the findings from this phase both in terms of the written presentation of the study methods and results (see Figure 3.3 below) and when interpreting the findings of both phases to make inferences to answer the overall research question.

Figure 3.3 below illustrates the mixed methods design employed for this study, highlighting how and where the different phases of the study are reported in the remainder of this thesis.
Chapter 3 - Mixed methods study design

Planning the study

Development of research questions
Ch 2- Literature review

Study design
Ch 3- Mixed methods study design

Phase I-
Household Expenditure Study

Methodology, Methods and Results
Ch 4- An analysis of the Household Expenditure Survey

Phase II-
Qualitative Interview Study

Methodology, Methods and Results
Ch 5- Qualitative Methodology and methods
Ch 6- Descriptive analysis of the qualitative data
Ch 7- Discourse analysis of the qualitative data

Data interpretation

Discussion of the results from each phase separately
Ch 8- Discussion of quantitative and qualitative findings

Development of mixed methods inferences
Ch 9- Mixed methods inferences and conclusion

Figure 3.3: An overview of the mixed method study design of the current study.
3.4 Maintaining research quality

As discussed above (see Section 3.2) the complementary strengths approach taken to mixing the assumptions of qualitative and quantitative methodologies within this study has implications for ensuring research quality. Given the independent status of the two phases of this study, the quality of the research processes used within each phase needed to be maintained and evaluated according to the separate, accepted standards for each methodological approach (Greene 2007). However, the inferences drawn from the findings of two research phases needed to be developed in line with, and evaluated according to, mixed methodology standards (Greene 2007).

Validity and reliability are essential in all research processes, whether they be quantitative or qualitative (Morse et al. 2002). Validity broadly refers to whether or not a research instrument measures what it is intended to measure (Jupp 2006; Sarantakos 2005). Questions around validity tend to focus on the relevance, precision and accuracy of the research processes employed, and their ability to produce findings that are in agreement with theoretical or conceptual values (Hammersley 1987; Sarantakos 2005). Reliability refers to whether a research instrument produces the same results every time it is employed, and judgements of reliability tend to focus on issues around objectivity, stability, and consistency of the research process (Hammersley 1987; Sarantakos 2005). Given the different methods and assumptions inherent in quantitative, qualitative and mixed methods research, these concepts are operationalised and judged in different ways for each approach. A more detailed discussion of the ways that validity and reliability were approached in each phase of this study are presented in Chapter 4 (quantitative phase) and Chapter 5 (qualitative phase).

As the quality of the methods used within each separate research phase were guided by the standards of their respective methodologies, a remaining issue was how to ensure the quality of the mixed method inferences produced when combining the findings of both phases. Discussion around validity in mixed methods research is in its infancy, but developing justified inferences has been identified as a significant issue for mixed methods research (Onwuegbuzie & Johnson 2006). An inference (sometimes called meta-inference) in a mixed methods study is best understood as an “overall conclusion, interpretation or learning achieved” (Greene 2007, p. 169). Several authors suggest ways of enhancing the validity of mixed methods inferences when combining and drawing conclusions about the results from mixed methods studies (Greene 2007; Onwuegbuzie & Johnson 2006; Teddlie & Tashakkori 2009).
Greene (2007) suggests drawing on one or more of the following strategies when making inferences within mixed methods studies:

- Using data of multiple and diverse kinds.
- Including criteria or stances from different methodological traditions.
- Considering the justifications for inquiry inferences a matter of persuasive argument or deliberation.
- Attending to the nature and extent of ‘better understanding’ that was achieved by employing a mixed methods study design.

These strategies were used to guide the interpretation processes of making inferences by drawing on the findings of the both quantitative and qualitative phases of this study.

3.5 Chapter summary

This chapter has outlined how and why both quantitative and qualitative approaches were combined in this mixed methods study. Each of the two phases of the study were introduced, and the mixed methods study design used in this study were discussed in detail. Full details of the methodology and methods used for each phase are presented in Chapter 4 (quantitative phase) and Chapter 5 (qualitative phase).
Chapter 4
An analysis of the Household Expenditure Survey

4.1 Chapter overview

This chapter presents the methodology, methods and results of the quantitative research phase. In this phase, I sought to answer the quantitative research question for this study by examining the relationship between income and spending patterns for healthy and unhealthy foods using data from the 2003-04 ABS HES. I explored these relationships in the main HES sample, which included all household types, as well as in a sub-sample of households that contained primary school-aged children.

4.2 Methodology

In conducting the quantitative phase of this study I adopted a post-positivist approach. This approach is based on a realist epistemology, that is, the fundamental idea that research is uncovering an existing reality, but at the same time it recognises that there are limitations to being able to observe and document a single, true, objective reality (Guest et al. 2013; Muijs 2004). Limitations include the complexity and unbounded nature of social and behavioural phenomena (such as food shopping patterns) and that the research process is always influenced and filtered through the researcher/s who conduct it (Guest et al. 2013). A post-positivist approach appreciates that all research methods that examine accounts of the objective world are flawed, and therefore only partially objective accounts can ever be produced (Denzin & Lincoln 2005).

In taking this methodological approach for this phase of the study, my aim was therefore to generate a reasonable approximation of reality (Guest et al. 2013; Muijs 2004), that is, to try and represent the reality of Australians’ food shopping behaviours based on those of a randomly selected representative sample of just under 7000 people.
4.3 Purpose and research questions

Previous research on the relationship between income and patterns of household expenditure on healthy and unhealthy foods has largely been conducted overseas. The primary purpose of the current analysis of the ABS HES was to ascertain whether household income was associated with different patterns of household purchases of healthy and unhealthy grocery foods in the Australian context.

Grocery food expenditure patterns in all household types, as well as those containing primary school-aged children, were the focus of this study. As explained in the previous chapter, the qualitative phase of this mixed method study was being designed and planned as the HES data was being analysed (see Figure 3.1 p. 47). This meant that in this quantitative phase food purchasing patterns were explored across all household types, as well as in a sub-sample of households containing primary school-aged children, in order to create the best opportunities to integrate the results of this HES analysis with those from the qualitative phase.

The research question that guided this quantitative research phase was:

What is the relationship between household income and purchasing patterns of healthy and unhealthy grocery foods in Australian households?

The objectives were:

Objective 1a: To examine the relationship between household income and the allocation of food expenditure between healthy and unhealthy grocery foods in Australian households

Objective 1b: To compare the relationships that exist between household income and the ways in which food expenditure is allocated to healthy and unhealthy grocery foods between all Australian households and those containing primary school-aged children.

As outlined in the literature review, there has been little exploration of the association between income and the proportional allocation of household food expenditure between healthy and unhealthy grocery foods. The one known study that has previously explored these specific relationships (Kirkpatrick & Tarasuk 2003), operationalised the concepts of income and healthy/unhealthy foods in slightly different ways to those used here. Therefore, the current study employed an exploratory approach to these research questions, testing the null hypotheses in each case.
The hypotheses tested were:

- There would be no relationship between income and the proportional expenditure allocated to healthy foods.
- There would be no relationship between income and the proportional expenditure allocated to unhealthy foods.
- There would be no difference in income-related food purchasing patterns between all household types and those that contain primary school children.

### 4.4 Methods

#### 4.4.1 The Household Expenditure Survey

**An overview of the survey**

The HES collects information on the expenditure, income, net worth and other characteristics of households resident in private dwellings across Australia. The HES was first conducted in 1974. Since that time the survey has been conducted eight times at irregular time intervals, with the two most recent surveys conducted in 2003-04 and 2009-10.

The current analyses of the HES data was undertaken in 2009-10 prior to entering the field for the qualitative phase of this study (see p. 47 for more detail). This study therefore utilised data from the 2003-04 HES as this was the most recent data available at the time. The data from the 2009-10 survey was released in mid-2011, well after completion of the qualitative interviews. While the more recent data would certainly be beneficial to explore in future studies, using the 2009-10 dataset was not practical given the timeline of the current mixed methods study.

The following section provides a brief overview of the purpose and scope of the HES and of the data available within the basic Confidentialised Unit Record Files (CURF) that were used to access the HES dataset for this study. The brief details provided here of the survey coverage and sampling and data collection procedures aim to convey the validity and reliability of the HES as a data source for the purposes of this study. All information presented below is drawn from the ABS website (www.abs.gov.au), the HES User Guide (ABS 2006d) and the CURF technical paper (ABS 2006c).
Purpose and scope

The ABS identifies two main objectives for the HES. The first is to identify the overall levels and patterns of expenditure on a comprehensive range of goods and services by Australian households. The second is to determine how these levels and patterns vary in relation to income and other household characteristics. Therefore, the information collected by the HES assists in measuring the economic wellbeing of Australian households, which in turn enables the assessment of levels of economic inequality and the effectiveness of the social support system and other mechanisms which aim to redistribute income between different types of households.

Information for the HES is collected from residents of private dwellings in both urban and rural areas of Australia, covering about 98% of the population, with only very remote and indigenous communities excluded. For the purposes of the HES, private dwellings include houses, flats, caravans, tents and other structures, and these are distinguished from non-private dwellings such as hotels, boarding schools and institutions. Information is collected from all people over the age of 15 who identify the selected dwellings as their own or main home, thereby excluding any visitors. Of the 9753 households initially approached for the 2003-04 HES, 71% responded with sufficient information to be included, with final total HES sample consisting of 6957 households.

Available data

Data were collected from members of each household at both the household level and the person level. Face-to-face interviews were conducted using computer assisted interview questionnaires and personal diaries were used to collect expenditure data. When required, interviewers who can speak languages other than English were used. The 2003-04 HES dataset included three main types of data:

Expenditure data

The HES collects detailed information on household expenditure, that is, all money that left a household and was spent on any goods or services. Food was one of 17 main areas of expenditure, with other areas covered such as housing, transport, clothing and footwear. Within each of these main areas, information was gathered on a range of specific expenditure items. For example, within the food category specific expenditure items included item number 0301040101 “Breakfast cereals” and item number 0308019903 “Fresh peas and beans”. In total, there were over 600 specific
expenditure items across all categories, with just over 100 of these pertaining to food and non-alcoholic beverages.

Expenditure on items that were infrequently purchased and/or shared by household members (e.g., household appliances, electricity bills or car registration within specific time periods) were recorded at the household level via the interview process. More frequent, individual level expenditure on day to day items (including food) were collected at the person level via the personal diaries which were provided to each household member over the age of 15 for use over a two week period.

All expenditure data made available in the HES dataset represented the average weekly spending by all members of the household. For food items, this meant that level of total household expenditure on each food item was therefore calculated by adding together the spending of all household members over the age of 15 for each item, then dividing that figure by two, to account for the two week data collection period.

**Income and financial data**

At the household level, information was collected about income from a wide range of sources including wages and salaries, an individual’s own business, government pensions and allowances, investments and superannuation. Other information about household finances included principle sources of income, details of mortgages and loans, government benefits and taxes and financial stress.

At the person level, information was gathered about income from sources as above together with each individual’s principle source of income, and any government benefits received or taxes paid.

**Socio-demographic and employment information**

Information shared by all members of the household such as the state or territory of residence, the type of dwelling, tenure type, the number of people residing within the household and details about children younger than 15 years were all recorded at the household level.

A wider range of more specific information about each individual over the age of 15 years was collected at the individual level, including details such as age, sex, marital status, country of birth, year of arrival in Australia, disability status, participation in school and other education and highest level of education attained. At
Chapter 4 - An analysis of the Household Expenditure Survey

this individual level, information was also collected about each person’s current employment details including labour force status, part-time or full-time work status, occupation, industry of main job and hours worked in all jobs.

When analysing expenditure data patterns, households often need to be described using characteristics that are in essence attributes of persons, rather than a households per se. For example, households may be described in terms of age as ‘older households’ or ‘younger households’. To assist in this process, the ABS identifies one person as the reference person for each household, who is most likely to be representative of a household. In the HES data, the following list of criteria are applied in turn to all household members aged 15 years and over, until a single appropriate household reference person is identified:

• One of the partners in a registered or de facto marriage, with dependent children.
• One of the partners in a registered or de facto marriage, without dependent children.
• A lone parent with dependent children.
• The person with the highest income.
• The eldest person.

Previous uses of the HES

The HES provides a rich source of data on household spending patterns on goods and services together with comprehensive socio-economic and socio-demographic details of households. As such, several studies have previously used the HES to examine the social patterning of expenditure on items related to a range of public health or other social issues.

Only two studies have previously used the HES to examine the social patterning of food expenditure. The relationship between the variety of foods purchased and individual and household characteristics in households headed by persons over the age of 55 have been investigated with the aim of improving nutritional interventions in the elderly Australian population (Temple 2006). This study focussed on the variety of food items for which households recorded expenditure, rather than the level of spending allocated to particular food items. Findings indicated that single person households, those with lower levels of education and those aged over 75 years were more likely to have reduced levels of dietary variety as indicated by their
expenditure patterns. More recently, the HES was used to investigate fast-food expenditure patterns (Thornton 2008). Thornton’s study investigated both the associations between expenditure on fast foods and expenditure on other items that were used as indicators of healthy and unhealthy food habits. His study found that fast-food expenditure was predictive of more spending on other unhealthy items such as soft drinks and less on healthy items such as fresh fruits and vegetables. The socio-economic and socio-demographic factors associated with fast-food expenditure were also examined, and higher expenditure was found to be associated with younger households, single male occupants, households without children, households with higher levels of education, occupation and income, as well as those with household reference persons born in Australia.

Other studies have drawn on the HES to examine the way households spend their money on goods and services in ways that relate to a range of health and social issues including: tobacco use and smoking (Siahpush 2003; Siahpush et al. 2003; Siahpush et al. 2004); medical and health care costs (Jones et al. 2008; Kemp et al. 2013); leisure and recreation time and activities (Aitken et al. 2008; Bittman 2002); and gambling participation (Worthington et al. 2007).

4.4.2 Analytic sample

A total of 6957 households were sampled in the 2003-04 HES. For the current study, two analytic samples were extracted from the full dataset, the first containing all households (main sample), and the second containing households with primary school-aged children (primary school sub-sample).

Main sample

All household types were included in the main sample as this allowed for the exploration of food purchasing patterns that reflect those of the whole population. Households were excluded from this sample if they reported zero or a negative disposable income (31 households excluded; 0.45% of sample) or total expenditure on all goods and services (1 household excluded, 0.01%), or if they reported zero for the total expenditure on all food and non-alcoholic beverage items (34 households excluded; 0.49%) or total grocery purchases (13 households excluded; 0.19%). The final size of the main sample was 6878 households.
Primary school sub-sample

The primary school sub-sample was based on the main sample, but was restricted to households that contained at least one child attending primary school (i.e., children approximately five to 11 years of age). Households were included in this sub-sample if the household reference person, when asked in the household-level interview, reported that one or more children living in their household currently attended a government, catholic or independent primary school. The final size of the primary school sub-sample was 1241 households.

4.4.3 Variable creation

Three separate data files were made available via the HES CURF that contained information at the person, household and expenditure levels respectively. Entries in each of these data files were linked by the inclusion of a household identification number. Relevant data from each of these three ABS data files was extracted and merged into a single household level file which was used for this analyses.

Defining healthy and unhealthy foods

When making judgements about whether or not an individual is eating ‘healthily’ it is important to consider the overall pattern of all foods that they consume (Freeland-Graves & Nitzke 2013). This means that the health value of a specific food item is related to its place in the context of all other foods eaten by an individual, which makes it difficult to draw clear delineations between foods which are ‘healthy’ and those which are ‘unhealthy’ (Hawkes 2009). However, in the public health nutrition context, it is often necessary to attempt to define foods along the lines of their health value, in order to create nutritional policies (for example, food labelling policies or television advertising policies) and to promote healthy eating patterns at a population level (Hawkes 2009).

A wide range of food-based and nutrient-based systems have been developed by governments, expert panels, NGOs and food industry bodies in order to define foods as ‘healthy’ or ‘unhealthy’ (see Hawkes 2009 for a thorough review). Some nutrient-based systems use thresholds for particular positive and/or negative nutrients (for example, the Australian Heart Foundation’s Tick program www.heartfoundation.org.au/healthy-eating/heart-foundation-tick) while others use more complex calculation and as such may determine a ‘score’ for specific food
items (for example, nutrient profiling as used in the UK to determine which foods may and may not be advertised to children (Department of Health (UK) 2011)).

In the HES, household food purchases were recorded by the ABS according to the category in which they best fit, and as such, there was no information available about the nutrition composition of food purchases made by the households surveyed. Therefore, following other similar studies in this area (Kirkpatrick & Tarasuk 2003; Ricciuto et al. 2006) a food-based approach was used in the current study to make judgements about the health value of household food purchases recorded in the HES. The details of the approach taken are outlined below.

The definitions of healthy and unhealthy foods used in the current analysis were based on the concepts of ‘core’ and ‘non-core’ foods as defined in the Australian Guide to Healthy Eating (AGHE) (Kellett et al. 1998; Smith et al. 1998). While this government-endorsed nutritional advice has recently been updated (NHMRC 2013b), the AGHE was current when this analysis was undertaken. There have been minimal changes in the general definitions of healthy and unhealthy foods in the revised guidelines.

In the AGHE, healthy foods are referred to as ‘core foods’ and are defined as those foods which “provide the important nutrients the body needs” (Kellett et al. 1998, p. 2) and are thus considered nutritional necessities. Five core food groups are identified in the AGHE, which classifies foods according to their nutritional composition (Smith et al. 1998):

- Breads, cereals, rice and pasta.
- Lean meats, fish, poultry, eggs, legumes and nuts.
- Milk, yoghurt and cheese.
- Fruit.
- Vegetables and legumes.

In contrast, ‘non-core foods’ are positioned as unhealthy foods, which “are not essential to provide the nutrients the body needs” (Smith et al. 1998, p. 15) and are therefore considered nutritional extras or non-necessities (Smith et al. 1998; Kellett et al. 1998). Examples of non-core foods include cakes, biscuits, desserts, lollies and chocolate, soft drinks and high fat snacks such as crisps, meat pies and other take-away foods. The AGHE also recommends that fats and oils and processed meats should be eaten only sometimes or in small amounts, so for the purposes of the current analysis, these foods were also classed as unhealthy foods.
Outcome variables

The relative levels of household food expenditure allocated to healthy and unhealthy grocery foods was the key outcome of interest. As explained above, each household member who was over the age of 15 recorded their expenditure on food in a personal diary. This information was aggregated at the household level by the ABS and made available as total household expenditure on 110 separately coded food and non-alcoholic beverage items (ABS food items). The following steps were undertaken to transform this raw data into a series of outcome variables that could be used to explore the relationship between income and patterns of household expenditure on healthy and unhealthy foods.

Step 1: Distinguishing grocery foods from foods away from home

Allocation of foods to three of the ABS food items appeared to be based on the place of preparation of food items, rather than other specific characteristics of the foods. These ABS food items were:

- 0311010201- Fast food and take-away (not frozen).
- 0311010101- Meals in restaurants, hotels, clubs and related.
- 0311010301- School lunch money.

The classification of foods in this way posed a problem for the process of classifying food expenditure as being associated with healthy or unhealthy foods. For example, the Household Expenditure Classification coding list (HEC coding list) (ABS 2006a) shows that expenditure going towards fast food or take-away foods may represent the purchase of high energy, high fat foods such as Kentucky Fried Chicken or a steak and onion pie, but may also represent spending on nutritious, low fat foods such as a salad sandwich or sushi. The lack of consistency in the characteristics of foods associated with these food away from home codes meant that judgements could not be made about the likely nutritional value of the foods that were represented by these three ABS food codes. Therefore, these three food expenditure items were omitted from the main analyses. The remaining 107 ABS food items, were all included in the main analysis, and from here will be referred to as grocery foods.

Step 2: Classifying grocery items as healthy, unhealthy or mixed

Next, the remaining grocery food items were classified as representing healthy, unhealthy or mixed foods. To do this, the HEC coding list (ABS 2006a) was
examined to ascertain the types of food products that were represented by expenditure recorded under each of the remaining 107 ABS food items. Judgements were made about whether a code contained healthy or unhealthy foods according to the concepts of core foods and non-core foods as defined in the AGHE (Smith et al. 1998) (see Section 4.3.4). ABS food items that were not clearly core or non-core products and items to which the ABS allocated a similar number of both core and non-core items were categorised as mixed foods.

The categorisation of purchases of fats and oils food items required careful consideration as they are not specifically defined as either core or non-core foods in the AGHE. The AGHE does however note that margarine and oils should be eaten only sometimes, and/or in small amounts. On the other hand, it is well recognised that the consumption of some fats and oils are important for health, with an emphasis on limiting the consumption of saturated fats rather than unsaturated fats, both in the AGHE and the more recently updated Australian Dietary Guidelines (NHMRC 2013a). In the current analysis it was not possible to adequately distinguish between the purchases of fats and oils that were likely to be high in saturated fats and those that were not, due to the way foods were coded in the HES. Therefore, all purchases that were coded as fats and oils were classified as being ‘unhealthy’ foods.

Some examples of the ABS foods codes and their component food products which were classified as healthy, unhealthy and mixed foods are shown in Table 4.1. A full list of all ABS food items and their classification as healthy, unhealthy or mixed appears in Appendix A. In total, 63 ABS food items were classified as healthy foods, 27 as unhealthy and 17 as mixed.
Step 3: Defining the food sub-groups

Five healthy food sub-groups were created that reflected the core food groups in the AGHE (‘breads and cereals’, ‘meat and alternatives’, ‘core dairy foods’, ‘fruit’ and ‘all vegetables’). An aggregate ‘total healthy foods’ sub-group was also created which represented expenditure on all of these sub-groups combined. Finally, two additional sub-groups were also created by disaggregating the all vegetables sub-group in order to separate fresh potatoes from other types of vegetables. These
additional two sub-groups, ‘potatoes’ and ‘other vegetables’, were created because the nutritional profile of potatoes differs from that of most other vegetables and potatoes were likely to account for a substantial portion of overall vegetable consumption (Krebs-Smith & Kantor 2001).

Seven unhealthy food sub-groups were created by grouping together the ABS food codes that represented similar, non-core or non-recommended food items (‘non-core meats’, ‘fats and oils’, ‘dips and dressings’, ‘savoury snacks’, ‘confectionary and desserts’, ‘cakes and biscuits’ and ‘non-core drinks’). An aggregate ‘total unhealthy foods’ sub-group was also created which represented expenditure on all of these sub-groups combined.

A list of the healthy and unhealthy food sub-groups are presented below in Table 4.2 together with examples of the types of foods that were included in each sub-groups. Appendix A lists the specific details of all ABS food items allocated to each sub-group.

Table 4.2: Food sub-groups used to create outcome variables for the household food expenditure analysis

<table>
<thead>
<tr>
<th>Food sub-group (number of ABS food items)</th>
<th>Examples of foods included in the group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy grocery foods</td>
<td></td>
</tr>
<tr>
<td>Breads and cereals (6)</td>
<td>Bread, flour, breakfast cereal, pasta and rice</td>
</tr>
<tr>
<td>Meats and alternatives (22)</td>
<td>Beef, lamb, chicken, pork, seafood, eggs, nuts</td>
</tr>
<tr>
<td>Core dairy foods (5)</td>
<td>Milk, cheese, yoghurt, soy milk</td>
</tr>
<tr>
<td>Fruit (15)</td>
<td>Fresh, processed or dried fruits</td>
</tr>
<tr>
<td>All vegetables (incl. potatoes) (15)</td>
<td>Fresh vegetables, other vegetables, vegetable juice</td>
</tr>
<tr>
<td>Total healthy foods (63)</td>
<td>Sum of the five core food sub-groups as above</td>
</tr>
<tr>
<td>Additional vegetable sub-groups*</td>
<td></td>
</tr>
<tr>
<td>Potatoes (1)</td>
<td>Fresh potatoes</td>
</tr>
<tr>
<td>Other vegetables (excl. potatoes) (14)</td>
<td>Vegetables as above excluding potatoes</td>
</tr>
<tr>
<td>Unhealthy grocery foods</td>
<td></td>
</tr>
<tr>
<td>Non-core meats (6)</td>
<td>Bacon, sausages, canned meat, smallgoods</td>
</tr>
<tr>
<td>Fats and oils (4)</td>
<td>Cream, butter and edible oils</td>
</tr>
<tr>
<td>Dips and dressings (2)</td>
<td>Dressings, sauces, dips and spreads</td>
</tr>
<tr>
<td>Savoury snacks (1)</td>
<td>Potato crisps or other savoury confectionary</td>
</tr>
<tr>
<td>Confectionary and desserts (8)</td>
<td>Sugar, jams and conserves, jellies and desserts, chocolate, ice confectionary</td>
</tr>
<tr>
<td>Cakes and biscuits (3)</td>
<td>Cakes, puddings and biscuits</td>
</tr>
<tr>
<td>Non-core drinks (3)</td>
<td>Soft drinks, cordials and food drinks</td>
</tr>
<tr>
<td>Total unhealthy foods (27)</td>
<td>Sum of the seven non-core food sub-groups as above</td>
</tr>
</tbody>
</table>

*The two additional vegetables sub-groups use the same ABS food items as the vegetables sub-group.
It is important to note that due to the focus of the research question on expenditure patterns on healthy and unhealthy foods, separate outcome variables were not created for expenditure on items classified as mixed foods. Expenditure on these foods was however taken into account in the calculation of the main outcome variables due to its inclusion as part of total household expenditure on all grocery foods.

In order to maximise the validity of the food expenditure variables created within this study, the final classifications of the ABS food codes as healthy, unhealthy and mixed, together with the grouping of expenditure items into food sub-groups, were checked by a qualified nutritionist (Assoc. Prof. Cate Burns).

**Step 4: Creating proportional expenditure variables**

The final step was to create proportional outcome variables to represent how households allocated their grocery food expenditure to healthy and unhealthy foods. To do this, the household expenditure allocated to each of the food sub-groups was divided by the household total expenditure on all grocery foods. Using this proportional measure of expenditure allowed for the examination of intra-household allocation of grocery food expenditure and therefore removed the effect of increasing absolute expenditure on groceries that occurs in line with increasing income (James et al. 1997).

**Predictor variables of interest**

The primary predictor variable of interest was the level of household disposable income as this represents the economic resources available to households. The ABS calculates this variable by deducting personal income tax and the compulsory Medicare levy from gross income, and adding family tax benefits (ABS 2006c). Income quintiles were created by dividing the main sample into five equal groups according to income. A household’s income quintile was used as the main predictor variable of interest in all statistical models. To ensure consistency between the results from the analysis of all households and those from the primary school sub-sample the income quintile calculated using the main sample was retained for the sub-sample analysis.
An equivalised income measure, which adjusts income for the number of people within a household was not used for this study because separate variables that represented household composition were included as covariates in all statistical models (see below).

**Covariates**

As outlined in the literature review, several other demographic and socio-economic factors are likely to be associated with income-related household food purchasing patterns. When selecting potential confounding variables for inclusion in social epidemiological studies it is recommended that decisions are guided by the use of causal diagrams (Glymour 2006) or hierarchical frameworks (Victora et al. 1997). These diagrams or frameworks are a way of summarising and illustrating one’s conceptualisations of causal (i.e., one way) relationships (Hernán et al. 2002). The covariates included in the current analyses were therefore conceptualised as shown below in Figure 4.1. A similar conceptual model has previous been used for a socio-economic analysis of Australian fast food purchasing (Thornton et al. 2011).

![Figure 4.1: Proposed causal relationships between income, socio-demographic covariates and food purchasing patterns](image)

The reasoning behind the inclusion of each of the covariates, and a description of the creation of the variables used in the current analyses to represent them are outlined below. It is important to note that the HES did not record who in each household was responsible for food shopping. This meant at times, it was necessary to use information recorded at an individual level to represent household level
characteristics. The ways in which this was done using the available data to create specific covariates are described below.

**Cultural background**

As people’s culture or ethnic background is very likely to influence their food purchasing patterns, it was important to include a covariate that captured information about the likely cultural or ethnic makeup of households. The best information available in the HES dataset that could be used for this purpose was country of birth. This variable was recorded at the person level, and the country of birth for each member of the household aged 15 years or over was identified as follows:

- Australia
- Other main English speaking country (New Zealand, United Kingdom, Ireland, Canada, United States of America and South Africa)
- Other country

For this covariate, the value recorded for the household reference person (defined on p. 58) was used as an indicator of the cultural background of the household.

**Age**

Age is known to be associated with patterns of food consumption (Fraser et al. 2000; Marti-Henneberg et al. 1999; Wandel 1995). The age of the household reference person was therefore used as an indicator of the likely composition of the household members in terms of age. Age was not available as a continuous variable in the HES dataset so a categorical variable was created to represent the age of the household reference person using the following values for the main sample:

- 15 to 24 years
- 25 to 34 years
- 35 to 44 years
- 45 to 54 years
- 55 to 64 years
- 65 years or older
As there were fewer relatively young or relatively old household reference persons in the primary school sub-sample, when analysing this sub-sample of the data the following values were used:

- 15 to 34 years
- 35 to 44 years
- 45 years or older

**Household composition and marital status**

Both the size of a household in terms of household members and the composition in terms of age influence food expenditure patterns (Ricciuto et al. 2006). To account for household size and composition as a covariate in this study, two variables were created that represented the number of adults and children residing with each household.

**Number of adults aged 18 years or older:**

- One adult
- Two adults
- Three or more adults

**Number of children aged zero to 17 years:**

- No children
- One child
- Two children
- Three or more children

As food consumption patterns have also been shown to vary between single people and those who are married (Roos et al. 1998), when households contain two or more adults, it is useful to account for whether the adults are in a couple relationship or are related or unrelated single people. The HES recorded each household member’s ‘social marital status’ as married or unmarried, with a married status including both registered and de facto marriages. The marital status of the household reference person was therefore also included in the adjusted analyses.
Education

Previous studies examining food purchasing patterns using household expenditure data have shown that differences exist between households with differing levels of education (Kirkpatrick & Tarasuk 2003; Ricciuto et al. 2006), it was therefore important to include an indicator of education as a potential confounding variable. The HES data contained information about the highest year of school completed and the level of highest post-school qualification completed for each household member over the age of 15. I created a single variable combining this information that described each adults’ highest completed level of education. The values of this variable were:

- No post-school qualifications
- Vocational training
- Diploma (associate or undergraduate)
- Bachelor degree or higher

It was then necessary to choose one person in the household whose level of education would be representative for that household. As the presence of one person with a higher level of education than others may influence the collective food purchasing decisions of a household, it was more appropriate to select the person with the highest level of education to represent that household, rather than to select that of the household reference person. This ensured that the level of education within each household was not underestimated.

It is important to note that occupation was not included as a covariate in this analysis. This is due to its position as an intermediate variable along the causal pathway between education and income (Fleischer & Diez Roux 2008). Previous studies indicate that adjusting for both education and occupation when examining income as a predictor of food purchasing is likely to constitute over-adjustment (Turrell & Kavanagh 2006).
4.4.5 Analytical methodology

The statistical analysis had two main components. The first component was a descriptive analysis of the dataset. Following this, regression analyses were conducted to examine the relationships between income and household food purchasing patterns. The statistical package Stata SE 10 (StataCorp 2007) was used for all original analyses with graphical output later revised and updated using Stata SE 12 (StataCorp 2011). The statistical methods used for each of these components are described in detail below.

Descriptive analyses

The initial descriptive analysis of the food expenditure data entailed examining patterns of household expenditure on four aggregate food groups across disposable income quintiles without adjusting for other socio-demographic or socio-economic factors. These aggregate food groups were ‘all food and non-alcoholic beverages’ (which included all 110 ABS food expenditure items) and ‘all grocery foods’ (which included the 107 ABS food expenditure items deemed to be grocery foods), and the total healthy foods and total unhealthy foods sub-groups as described above. Levels of both raw expenditure and proportional expenditure were examined. For the proportional analysis, expenditure on all foods and non-alcoholic beverages and all grocery foods were expressed as proportions of total household expenditure on all goods and services, with expenditure on total healthy and total unhealthy foods being expressed as proportions of expenditure on all grocery foods. The linear trends across disposable income quintiles were tested for statistical significance using simple linear regression, treating the categorical predictor variable of income quintile as a continuous variable. This was a more appropriate approach than using ANOVA, which would test for differences between the separate quintiles of income, as the patterns of expenditure across all quintiles as income increased (or decreased) was of primary interest to the research question.

A similar descriptive analysis of expenditure patterns was also conducted for all of the individual healthy and unhealthy food sub-groups. This analysis examined the mean levels of proportional and raw grocery expenditure allocated to each food sub-group, within the main sample and also the primary school sub-sample, to ascertain a broad picture of how households allocated their grocery expenditure across the range of healthy and unhealthy grocery food sub-groups.
**Binomial logit analyses**

The choice of regression models used for this analysis required careful consideration as the key outcomes of interest were proportional, and therefore bounded, with possible values limited to those between zero and one (equivalent to 0% - 100%). Given this, a regression analyses with a robust generalised linear model (GLM) using the logit link function and the binomial distribution was the most appropriate analytic approach with which to answer the proposed research question (Baum 2008; Cohen et al. 2003). Statistical models were employed to test for differences in the proportional allocation of grocery expenditure on healthy and unhealthy foods between income quintiles, and for trends across the quintiles. All models were adjusted for the covariates outlined above with the highest-income quintiles used as the reference group. A p-value of 0.05 was used to indicate statistical significance for both the differences between income quintiles (in comparison to the highest, reference quintile) and the trends across income quintiles.

As beta coefficients from this type of model are difficult to interpret (Hardin & Hilbe 2007), exponentiated beta-coefficients were calculated. These exponentiated values represent the percentage change in proportional expenditure allocated to the food sub-group by participants in a specific income quintile compared to those in the reference quintile (with all covariates held constant) (Hailpern & Visintainer 2003; Hardin & Hilbe 2007). For example, a value of 1.27 (displayed as 127% in the graphs) for the lowest-income quintile represents this group of households allocating 27% more of their grocery expenditure to a food sub-group compared to the highest (reference) income quintile. It is important to note that these exponentiated results are based on a logarithmic scale which means a value of 0.5 represents a half the level of expenditure (50%) of the reference quintile, and 2 represents double the expenditure (200%).
Chapter 4 - An analysis of the Household Expenditure Survey

4.5 Results

4.5.1 Description of the samples

Main sample- All households

The main sample consisted of 6878 households. The median household weekly disposable income for this sample was $800.40. Disposable incomes ranged between $1.00 and $8484.47 per week. The cutoffs for the weekly disposable income quintiles are displayed below in Table 4.3.

Table 4.3: Range of income included in each of the income quintiles

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Weekly income range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>less than $414.56</td>
</tr>
<tr>
<td>2nd</td>
<td>$414.97 to $656.97</td>
</tr>
<tr>
<td>3rd</td>
<td>$657.21 to $946.40</td>
</tr>
<tr>
<td>4th</td>
<td>$946.57 to $1342.50</td>
</tr>
<tr>
<td>Highest</td>
<td>more than $1342.85</td>
</tr>
</tbody>
</table>

The household reference person’s age most frequently fell within the 45 to 54 years category, and the majority of household reference persons (72.9%) were born in Australia. Most households (65.5%) contained adults only. Most households (67.3%) also contained at least one person who had completed post-school education, with 27.4% of households having at least one member with bachelor degree or higher qualification. Full details of the socio-demographic description of the main sample appear in Table 4.4.
Table 4.4: Descriptive statistics for the main sample- includes all household types

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of households</strong></td>
<td>6878</td>
<td>(100)</td>
</tr>
<tr>
<td><strong>Household weekly disposable income decile</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td>1376</td>
<td>(20.0)</td>
</tr>
<tr>
<td>2\textsuperscript{nd}</td>
<td>1376</td>
<td>(20.0)</td>
</tr>
<tr>
<td>3\textsuperscript{rd}</td>
<td>1375</td>
<td>(20.0)</td>
</tr>
<tr>
<td>4\textsuperscript{th}</td>
<td>1376</td>
<td>(20.0)</td>
</tr>
<tr>
<td>Highest</td>
<td>1375</td>
<td>(20.0)</td>
</tr>
<tr>
<td><strong>Age of household reference person</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 to 24 years</td>
<td>298</td>
<td>(4.3)</td>
</tr>
<tr>
<td>25 to 34 years</td>
<td>1,163</td>
<td>(16.9)</td>
</tr>
<tr>
<td>35 to 44 years</td>
<td>1,597</td>
<td>(23.2)</td>
</tr>
<tr>
<td>45 to 54 years</td>
<td>1,409</td>
<td>(20.5)</td>
</tr>
<tr>
<td>55 to 64 years</td>
<td>1,099</td>
<td>(16.0)</td>
</tr>
<tr>
<td>65 years or older</td>
<td>1,312</td>
<td>(19.1)</td>
</tr>
<tr>
<td><strong>Country of birth of household reference person</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>5,012</td>
<td>(72.9)</td>
</tr>
<tr>
<td>Other main English speaking countries</td>
<td>785</td>
<td>(11.4)</td>
</tr>
<tr>
<td>Other</td>
<td>1,081</td>
<td>(15.7)</td>
</tr>
<tr>
<td><strong>Number of adults 18 years and over</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One adult</td>
<td>2083</td>
<td>(30.3)</td>
</tr>
<tr>
<td>Two adults</td>
<td>3881</td>
<td>(56.4)</td>
</tr>
<tr>
<td>Three or more adults</td>
<td>914</td>
<td>(13.3)</td>
</tr>
<tr>
<td><strong>Number of children aged 0-17 years</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No children</td>
<td>4507</td>
<td>(65.5)</td>
</tr>
<tr>
<td>One child</td>
<td>857</td>
<td>(12.5)</td>
</tr>
<tr>
<td>Two children</td>
<td>998</td>
<td>(14.5)</td>
</tr>
<tr>
<td>Three or more children</td>
<td>516</td>
<td>(7.5)</td>
</tr>
<tr>
<td><strong>Social marital status of household reference person</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>4244</td>
<td>(61.7)</td>
</tr>
<tr>
<td>Not married</td>
<td>2634</td>
<td>(38.3)</td>
</tr>
<tr>
<td><strong>Highest education of any member of household</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No post-school qualifications</td>
<td>2246</td>
<td>(32.7)</td>
</tr>
<tr>
<td>Vocational</td>
<td>1,999</td>
<td>(29.1)</td>
</tr>
<tr>
<td>Diploma</td>
<td>747</td>
<td>(10.9)</td>
</tr>
<tr>
<td>Bachelor or post graduate</td>
<td>1,886</td>
<td>(27.4)</td>
</tr>
</tbody>
</table>
Sub-sample- Primary school households

There were 1241 households that contained at least one child attending a primary school and together formed the sub-sample for this study. The median household weekly disposable income for this primary school sub-sample was $1002.70, with just under 80% of households reporting incomes in the top three quintiles. The greatest number of household reference persons in this sub-sample were in the 35-44 years age category (58.9%) and the vast majority of household reference persons (73.3%) were born in Australia. Most households had two adults present (71.7% of the sub-sample), with about one fifth of the sub-sample representing single parent families. All households in this sub-sample contained children and most frequently households contained two children (48%). The household reference person in most households (75.9%) reported being in a registered marriage or de facto relationship. The highest level of education of any household member was very similar to the main sample, with more than 70% of households containing at least one person who had completed some form of post school education. Full socio-demographic details for the primary school sub-sample are provided in Table 4.5.
Table 4.5: Descriptive statistics for the primary school sub-sample - includes only households that contain at least one child of primary school age

<table>
<thead>
<tr>
<th>Category</th>
<th>Total n</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of households</td>
<td>1241</td>
<td>(100)</td>
</tr>
<tr>
<td>Household weekly disposable income quintile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td>82</td>
<td>(6.6)</td>
</tr>
<tr>
<td>2nd</td>
<td>186</td>
<td>(15.0)</td>
</tr>
<tr>
<td>3rd</td>
<td>286</td>
<td>(23.1)</td>
</tr>
<tr>
<td>4th</td>
<td>388</td>
<td>(31.3)</td>
</tr>
<tr>
<td>Highest</td>
<td>299</td>
<td>(24.1)</td>
</tr>
<tr>
<td>Age of household reference person</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 to 34 years</td>
<td>265</td>
<td>(21.4)</td>
</tr>
<tr>
<td>35 to 44 years</td>
<td>731</td>
<td>(58.9)</td>
</tr>
<tr>
<td>45 years or older</td>
<td>245</td>
<td>(19.7)</td>
</tr>
<tr>
<td>Country of birth of household reference person</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>911</td>
<td>(73.3)</td>
</tr>
<tr>
<td>Other main English speaking countries</td>
<td>126</td>
<td>(10.2)</td>
</tr>
<tr>
<td>Other</td>
<td>204</td>
<td>(16.4)</td>
</tr>
<tr>
<td>Number of adults 18 years and over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One adult</td>
<td>256</td>
<td>(20.6)</td>
</tr>
<tr>
<td>Two adults</td>
<td>890</td>
<td>(71.7)</td>
</tr>
<tr>
<td>Three or more adults</td>
<td>95</td>
<td>(7.7)</td>
</tr>
<tr>
<td>Number of children aged 0-17 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One child</td>
<td>209</td>
<td>(16.8)</td>
</tr>
<tr>
<td>Two children</td>
<td>595</td>
<td>(48.0)</td>
</tr>
<tr>
<td>Three or more children</td>
<td>437</td>
<td>(35.2)</td>
</tr>
<tr>
<td>Social marital status of household reference person</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>942</td>
<td>(75.9)</td>
</tr>
<tr>
<td>Not married</td>
<td>299</td>
<td>(24.1)</td>
</tr>
<tr>
<td>Highest education of any member of household</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No post-school qualifications</td>
<td>338</td>
<td>(27.2)</td>
</tr>
<tr>
<td>Vocational</td>
<td>404</td>
<td>(32.6)</td>
</tr>
<tr>
<td>Diploma</td>
<td>136</td>
<td>(11.0)</td>
</tr>
<tr>
<td>Bachelor or post graduate</td>
<td>363</td>
<td>(29.3)</td>
</tr>
</tbody>
</table>
4.5.2 Descriptive analyses

*Descriptive findings for the all food and non-alcoholic beverages and all grocery food items food groups*

An examination of the unadjusted relationships between income and expenditure on all foods and non-alcoholic beverages and all grocery foods revealed clear income-related patterns (see Table 4.6). The proportion of total household expenditure allocated to each of these aggregate food groups decreased as household income increased ($p<0.001$). In line with this, the dollars spent on each of these broad areas of food expenditure increased significantly with increasing income ($p<0.001$).

Table 4.6: Descriptive analysis of the relationship between income and expenditure on ‘all food and non-alcoholic beverages’ and ‘all grocery food items’ (not adjusted for any co-variates)

<table>
<thead>
<tr>
<th>Proportion of total household expenditure (%)</th>
<th>Total expenditure ($)</th>
<th>Proportion of total household expenditure (%)</th>
<th>Total expenditure ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean (s.d.)</td>
<td>mean (s.d.)</td>
<td>mean (s.d.)</td>
<td>mean (s.d.)</td>
</tr>
<tr>
<td><strong>All food and non-alcoholic beverages</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All quintiles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest have the lowest proportion</td>
<td>19.2 (9.1)</td>
<td>154.56 (100.35)</td>
<td>20.1 (8.2)</td>
</tr>
<tr>
<td>2nd</td>
<td>21.6 (10.7)</td>
<td>79.33 (55.91)</td>
<td>22.3 (9.5)</td>
</tr>
<tr>
<td>3rd</td>
<td>20.0 (9.8)</td>
<td>110.60 (63.51)</td>
<td>22.2 (9.7)</td>
</tr>
<tr>
<td>4th</td>
<td>18.4 (8.7)</td>
<td>147.60 (77.75)</td>
<td>20.9 (8.1)</td>
</tr>
<tr>
<td>Highest</td>
<td>18.3 (7.9)</td>
<td>186.65 (81.57)</td>
<td>19.6 (7.9)</td>
</tr>
<tr>
<td>p for trend</td>
<td>$&lt;0.001$</td>
<td></td>
<td>$&lt;0.001$</td>
</tr>
<tr>
<td><strong>All grocery food items</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All quintiles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest have the lowest proportion</td>
<td>14.8 (8.5)</td>
<td>112.29 (70.36)</td>
<td>15.9 (7.6)</td>
</tr>
<tr>
<td>2nd</td>
<td>18.6 (10.4)</td>
<td>66.37 (46.80)</td>
<td>19.7 (9.5)</td>
</tr>
<tr>
<td>3rd</td>
<td>16.2 (9.2)</td>
<td>87.06 (51.17)</td>
<td>19.1 (9.3)</td>
</tr>
<tr>
<td>4th</td>
<td>13.9 (7.8)</td>
<td>108.94 (61.07)</td>
<td>16.7 (7.6)</td>
</tr>
<tr>
<td>Highest</td>
<td>13.4 (7.0)</td>
<td>134.70 (64.23)</td>
<td>15.2 (6.7)</td>
</tr>
<tr>
<td>p for trend</td>
<td>$&lt;0.001$</td>
<td></td>
<td>$&lt;0.001$</td>
</tr>
</tbody>
</table>

Chapter 4 - An analysis of the Household Expenditure Survey
The changes in proportional expenditure for all foods and beverages across quintiles appear to be relatively modest, with differences of about 4% between the highest- and the lowest-income quintiles in both the main sample and the primary school sub-sample. However, these small proportional differences translate into very large differences in dollar terms, with the highest quintile spending over three times as much money on all foods and beverages as the lowest-income quintile in the main sample, and just over double the amount in the primary school sub-sample.

The differences between income quintiles for proportional expenditure allocated to all grocery foods are slightly larger than those for all foods and beverages, with the difference in the main sample being about 6.5%, and about 7% in the primary school sub-sample. Again, these differences translate into marked differences in real terms, with households in the highest-income quintile spending over twice as much on all grocery items as those in the lowest-income quintile in the main sample ($66.37 versus $164.40), and about 75% more in the primary school sample ($106.75 versus $185.96).

Descriptive findings for the total healthy foods and total unhealthy foods sub-groups

Income-related patterns were also evident in the descriptive analysis of expenditure allocation to the sub-groups of total healthy foods and total unhealthy foods (see Table 4.7). In the main sample, statistically significant, income-related trends were seen in the proportion of grocery expenditure allocated to both healthy and unhealthy foods. The trend was negative for total healthy foods, and positive for total unhealthy foods. Interestingly, and against the general trends, the highest quintile allocated a greater proportion of grocery expenditure to total healthy foods, and a lower proportion of grocery expenditure to total unhealthy foods in comparison to the fourth quintile. There were no significant income-related trends in the proportional expenditure allocated to either the total healthy or total unhealthy food groups in the primary school sub-sample.
Table 4.7: Descriptive analysis of the relationship between income and expenditure allocated to the total healthy foods and total unhealthy foods subgroups.

<table>
<thead>
<tr>
<th></th>
<th>All households</th>
<th></th>
<th>Primary school households</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Proportion of</td>
<td>Total expenditure</td>
<td>Proportion of</td>
<td>Total expenditure</td>
</tr>
<tr>
<td></td>
<td>grocery</td>
<td>($               )</td>
<td>grocery</td>
<td>($               )</td>
</tr>
<tr>
<td></td>
<td>expenditure</td>
<td>(s.d.)</td>
<td>expenditure</td>
<td>(s.d.)</td>
</tr>
<tr>
<td></td>
<td>mean</td>
<td>mean            (s.d.)</td>
<td>mean           (s.d.)</td>
<td>mean           (s.d.)</td>
</tr>
<tr>
<td>Total healthy foods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All quintiles</td>
<td>56.0 (16.9)</td>
<td>62.51 (42.75)</td>
<td>51.8 (14.9)</td>
<td>78.97 (44.10)</td>
</tr>
<tr>
<td>Lowest</td>
<td>59.6 (18.0)</td>
<td>39.41 (30.02)</td>
<td>51.4 (15.3)</td>
<td>53.46 (38.81)</td>
</tr>
<tr>
<td>2nd</td>
<td>56.3 (18.0)</td>
<td>49.74 (34.82)</td>
<td>51.9 (16.8)</td>
<td>57.08 (38.23)</td>
</tr>
<tr>
<td>3rd</td>
<td>55.5 (17.0)</td>
<td>60.60 (37.93)</td>
<td>51.2 (15.4)</td>
<td>69.31 (35.15)</td>
</tr>
<tr>
<td>4th</td>
<td>53.7 (15.2)</td>
<td>72.42 (39.75)</td>
<td>51.0 (14.3)</td>
<td>86.04 (41.57)</td>
</tr>
<tr>
<td>Highest</td>
<td>54.8 (15.5)</td>
<td>90.37 (49.35)</td>
<td>53.7 (13.8)</td>
<td>99.66 (47.81)</td>
</tr>
<tr>
<td>p for trend</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>0.191</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Total unhealthy foods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All quintiles</td>
<td>28.0 (13.6)</td>
<td>31.30 (24.42)</td>
<td>31.2 (12.8)</td>
<td>47.04 (28.70)</td>
</tr>
<tr>
<td>Lowest</td>
<td>26.2 (14.4)</td>
<td>17.28 (15.76)</td>
<td>31.3 (14.2)</td>
<td>35.14 (32.99)</td>
</tr>
<tr>
<td>2nd</td>
<td>28.0 (14.4)</td>
<td>23.65 (16.77)</td>
<td>30.5 (14.3)</td>
<td>32.88 (21.19)</td>
</tr>
<tr>
<td>3rd</td>
<td>28.1 (14.2)</td>
<td>30.37 (22.30)</td>
<td>30.7 (13.3)</td>
<td>41.90 (25.51)</td>
</tr>
<tr>
<td>4th</td>
<td>29.9 (12.6)</td>
<td>39.90 (25.00)</td>
<td>32.5 (12.2)</td>
<td>53.32 (27.85)</td>
</tr>
<tr>
<td>Highest</td>
<td>27.7 (11.8)</td>
<td>45.32 (28.39)</td>
<td>30.3 (11.6)</td>
<td>55.89 (30.06)</td>
</tr>
<tr>
<td>p for trend</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>0.854</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Positive trends (p<0.001) were evident across income quintiles for raw expenditure allocated to the total healthy and unhealthy sub-groups in both the main sample and the primary school sub-sample. The difference in levels of spending between the lowest- and highest-income quintiles was greater for both food sub-groups in the main sample compared to the primary school sub-sample. In the main sample, the highest-income quintile spent over twice as much on total healthy foods as the lowest quintile ($90.37 versus $39.41) and over two and a half times as much on total unhealthy foods ($45.32 versus $17.28). For primary school households the differences were smaller, but still significant, with the mean expenditure for the highest quintile being over one and a half times as much as that of the lowest quintile for both the total healthy foods sub-group ($99.66 versus $53.46) and the total unhealthy foods sub-group ($55.89 versus $35.14).
Descriptive findings for specific healthy and unhealthy food sub-groups

The analysis of expenditure patterns on the individual healthy and unhealthy food sub-groups (see Table 4.8) showed that of all the sub-groups, the meats and alternatives sub-group received the largest allocation of proportional household grocery expenditure (18.9% in all households, 16.7% in the primary school sub-sample). In both the main sample and the primary school sub-sample, the healthy food sub-groups were generally allocated higher levels of expenditure than unhealthy sub-groups. The exception was the unhealthy food group of confectionary and desserts, which in the main sample was allocated a slightly higher level of expenditure than the healthy sub-group of fruit (confectionary and desserts 8.2% versus fruit 7.8%). In the primary school sub-sample, confectionary and desserts was allocated a higher level of expenditure than both the fruits and vegetables sub-groups (confectionary and desserts 9.9% versus vegetables 8.4% versus fruit 6.8%).

Full details of the proportional and raw levels of expenditure allocated to the healthy and unhealthy sub-groups across the income quintiles appear in Appendix B.

Table 4.8: Proportional and raw household expenditure allocated to healthy and unhealthy food sub-groups within the main sample and the primary school sub-sample.

<table>
<thead>
<tr>
<th></th>
<th>All households</th>
<th>Primary school households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Proportion of</td>
<td>Total expenditure</td>
</tr>
<tr>
<td></td>
<td>grocery</td>
<td>($ )</td>
</tr>
<tr>
<td></td>
<td>expenditure (%)</td>
<td>mean (s.d)</td>
</tr>
<tr>
<td>Healthy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breads and cereals</td>
<td>9.3 (6.4)</td>
<td>9.81 (7.84)</td>
</tr>
<tr>
<td>Meat alternatives</td>
<td>18.9 (12.2)</td>
<td>22.42 (20.42)</td>
</tr>
<tr>
<td>Core dairy foods</td>
<td>10.2 (7.9)</td>
<td>10.52 (8.46)</td>
</tr>
<tr>
<td>Fruit</td>
<td>7.8 (7.1)</td>
<td>8.84 (9.80)</td>
</tr>
<tr>
<td>All vegetables (incl. potatoes)</td>
<td>9.7 (6.7)</td>
<td>10.91 (9.37)</td>
</tr>
<tr>
<td>Potatoes</td>
<td>1.2 (1.7)</td>
<td>1.26 (1.71)</td>
</tr>
<tr>
<td>Other vegetables (excl. potatoes)</td>
<td>8.5 (6.3)</td>
<td>9.66 (8.70)</td>
</tr>
<tr>
<td>Unhealthy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-core meats</td>
<td>3.4 (4.3)</td>
<td>3.85 (4.72)</td>
</tr>
<tr>
<td>Fats and oils</td>
<td>2.0 (2.7)</td>
<td>2.12 (2.80)</td>
</tr>
<tr>
<td>Dips and dressings</td>
<td>2.0 (2.4)</td>
<td>2.37 (2.94)</td>
</tr>
<tr>
<td>Savoury snacks</td>
<td>1.5 (2.6)</td>
<td>1.79 (2.84)</td>
</tr>
<tr>
<td>Confectionary and desserts</td>
<td>8.2 (7.4)</td>
<td>9.40 (10.10)</td>
</tr>
<tr>
<td>Cakes and biscuits</td>
<td>5.8 (5.8)</td>
<td>6.47 (6.89)</td>
</tr>
<tr>
<td>Non-core drinks</td>
<td>5.0 (7.5)</td>
<td>5.30 (7.18)</td>
</tr>
</tbody>
</table>
4.5.3 Binomial logit models

Healthy foods

Figure 4.2 displays the results from the adjusted GLM models for the healthy food sub-groups for the main sample and the primary school sub-sample respectively. The detailed numerical results from these binomial logit models are provided in Appendix C.

In the main sample, strong negative trends were observed in the healthy sub-groups of breads and cereals (p<0.001) and core dairy foods (p=0.001). Compared to the highest quintile, all four lower-income quintiles allocated a significantly greater proportion of their grocery expenditure to the sub-group of breads and cereals. The lowest- and middle-income quintiles allocated significantly more grocery expenditure to core dairy foods in comparison to the highest quintile. The differences between the highest and lowest quintiles for these sub-groups was substantial, with the lowest quintile allocating 19% (CI: 11-29%, p<0.001) more of their total grocery expenditure to breads and cereals, and 16% (CI: 6-26%, p<0.01) more to core dairy foods than the highest-income quintile. The overall patterns of expenditure allocation were similar for these sub-groups in the primary school sub-sample, but the trends were not statistically significant for any healthy food sub-groups in the sub-sample.

A statistically significant trend (p=0.034) was also seen in the total vegetable (incl. potatoes) sub-group in the main sample. However, the magnitude of difference between the quintiles was much lower than for the breads and cereals and core dairy foods groups, with only the lowest-income quintile allocating a significantly greater proportion of grocery expenditure (8%, CI: 0-17%, p<0.05 ) to this group in comparison to the highest quintile. The additional analysis which separated out the sub-groups of potatoes and other vegetables (excl. potatoes) demonstrated that the expenditure patterns for potatoes (trend p< 0.001) accounted for the negative income-related trend seen in the total vegetables sub-group. The level of proportional expenditure allocated to potatoes was 39% (CI: 20-61%, p<0.001) greater in the lowest-income quintile compared to the highest quintile. However, given that the average proportion of grocery expenditure allocated to potatoes was 1.2% (see Table 4.8) this is not a very large between-group difference in real terms. Again, similar expenditure patterns were seen in the primary school sub-sample for the vegetable sub-groups, but there were no statistically significant trends present in the sub-sample.
Table 4.1: % change in proportion of grocery expenditure by household type

<table>
<thead>
<tr>
<th>Category</th>
<th>All Households</th>
<th>Primary School Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bread and cereals</td>
<td>p for trend &lt; 0.001</td>
<td>p for trend = 0.065</td>
</tr>
<tr>
<td>Meats and alternatives</td>
<td>p for trend = 0.427</td>
<td>p for trend = 0.925</td>
</tr>
<tr>
<td>Core dairy foods</td>
<td>p for trend = 0.001</td>
<td>p for trend = 0.203</td>
</tr>
<tr>
<td>Fruit</td>
<td>p for trend &lt; 0.001</td>
<td>p for trend = 0.168</td>
</tr>
</tbody>
</table>

*p < 0.05, ** p < 0.01, *** p < 0.001 for differences between income quintile and the reference quintile
All models adjusted for education, number of adults and children in the household and the age, country of birth and social marital status of hh ref person

Figure 4.2 - part A (continued next page)
Chapter 4 - An analysis of the Household Expenditure Survey

83

All households

% change in prop. of grocery exp. (incl. potatoes) (excl. potatoes)

*p for trend = 0.034

*p for trend < 0.001

***p for trend = 0.356

p for trend = 0.001

Primary school households

% change in prop. of grocery exp.

All vegetables

Potatoes

Other vegetables (excl. potatoes)

Total healthy foods

*p for trend = 0.078

*p for trend = 0.069

*A* all models adjusted for education, number of adults and children in the household and the age, country of birth and social marital status of hh ref person

Figure 4.2 (parts A and B): The relationship between income and proportional expenditure allocated to the healthy grocery food sub-groups

* p < 0.05, ** p < 0.01, *** p < 0.001 for differences between income quintile and the reference quintile

All models adjusted for education, number of adults and children in the household and the age, country of birth and social marital status of hh ref person.
A significant positive trend \( (p<0.001) \) was seen for the sub-group of fruit in the main sample, with all of the lower-income quintiles allocating less of their grocery expenditure to this sub-group compared to the highest-income quintile (lowest quintile 15\%, CI: 6-23\%, \( p<0.01 \)). A positive, but non-significant, trend was also evident for fruit in the primary school sub-sample. However, in the sub-sample, households in the middle and fourth quintiles allocated the lowest levels of proportion expenditure to fruit, with the middle quintile allocating 21\% (CI: 7-32\%, \( p<0.01 \)) less than the highest quintile and the fourth quintile 14\% less (CI: 3-24\%, \( p<0.05 \)).

There were no statistically significant differences between income quintiles for the meat and alternatives sub-group in either the main sample or the primary school sub-sample.

When examining the total healthy foods sub-group, a significant negative trend was present across the income quintiles \( (p=0.001) \) in the main sample, but only the lowest quintile allocated a significantly higher level of proportional expenditure (12\% CI: 4-20 \%, \( p<0.01 \)) to this aggregate food group compared to the highest quintile. There was no significant trend for primary school households in this aggregate group.

**Unhealthy foods**

Figure 4.3 displays the results from the adjusted GLM models for the unhealthy food sub-groups for both the main sample of all households and the primary school sub-sample. The detailed numerical results from these binomial logit models are provided in Appendix C.
Chapter 4 - An analysis of the Household Expenditure Survey

All households

<table>
<thead>
<tr>
<th>Product Type</th>
<th>% change in prop. of grocery exp.</th>
<th>p for trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-core meats</td>
<td>p for trend = 0.001</td>
<td></td>
</tr>
<tr>
<td>Fats and oils</td>
<td>p for trend &lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>Dips and dressings</td>
<td>p for trend = 0.560</td>
<td></td>
</tr>
<tr>
<td>Savoury snacks</td>
<td>p for trend = 0.530</td>
<td></td>
</tr>
</tbody>
</table>

Primary school households

<table>
<thead>
<tr>
<th>Product Type</th>
<th>% change in prop. of grocery exp.</th>
<th>p for trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-core meats</td>
<td>p for trend = 0.185</td>
<td></td>
</tr>
<tr>
<td>Fats and oils</td>
<td>p for trend = 0.002</td>
<td></td>
</tr>
<tr>
<td>Dips and dressings</td>
<td>p for trend = 0.365</td>
<td></td>
</tr>
<tr>
<td>Savoury snacks</td>
<td>p for trend = 0.481</td>
<td></td>
</tr>
</tbody>
</table>

* p < 0.05, ** p < 0.01, *** p < 0.001 for differences between income quintile and the reference quintile

All models adjusted for education, number of adults and children in the household and the age, country of birth and social marital status of hh ref person

Figure 4.3 - part A (continued next page)
Figure 4.3 (parts A and B): The relationship between income and proportional expenditure allocated to the unhealthy grocery food sub-groups

* p < 0.05, ** p < 0.01, *** p < 0.001 for differences between income quintile and the reference quintile
All models adjusted for education, number of adults and children in the household and the age, country of birth and social marital status of hh ref person
In the main sample, strong negative trends were observed across income quintiles for both the sub-groups of fats and oils (p<0.001) and non-core meats (p=0.001). All four lower-income quintiles allocated a greater proportion of grocery expenditure to the fats and oils sub-group compared to the highest quintile, and the lower two quintiles did the same for non-core meats. The between-group differences in these two unhealthy sub-groups were fairly large, with the lowest-income quintile allocating 33% (CI: 17-52%, p<0.001) more proportional expenditure to fats and oils than the highest quintile, and 24% (CI: 9-42%, p<0.01) more to non-core meats in comparison to the highest quintile. Similar patterns of expenditure were evident for these food sub-groups in the primary school sub-sample. The trend across income quintiles only remained significant for the fats and oils sub-group (p=0.002) in the primary school sub-sample. Here, there were even larger between group differences observed than those seen in the main sample, with the lowest quintile allocating 56% (CI: 16-110%, p<0.01) more proportional expenditure to fats and oils compared to the highest quintile.

A significant positive trend (p=0.007) was seen for the sub-group of non-core drinks in the main sample. However, this trend does appear to be predominantly due to the significantly lower proportions of grocery expenditure allocated to this sub-group by the lowest quintile (26% CI:12-38%, p<0.001) in comparison to the highest quintile. This marked difference between the lowest and other quintiles was not present in the primary school sub-sample, nor was there a trend evident across the income quintiles.

There were no income-related significant trends observed in the proportional grocery expenditure allocated to any of the other unhealthy sub-groups, or to the aggregate total unhealthy foods sub-group. However, there were some interesting between group differences evident in some of these sub-groups. For the savoury snacks sub-group, the middle and fourth quintiles displayed significantly higher levels of proportional expenditure in comparison to the highest quintile (19%- CI: 5-34% p<0.01 and 14% CI: 3-24%, p<0.05 respectively). Visually, the proportional expenditure on savoury snacks can be seen to rise and then fall as household income increases. The fourth-income quintile also stood out as allocating a higher level of proportional expenditure to confectionary and desserts (8% CI: 1-15%, p<0.05) in comparison to the highest quintile. This fourth quintile was also the only group that had a significantly higher level of expenditure (9% CI: 4-14%, p<0.001) on the total unhealthy foods sub-group in comparison to the highest quintile.
4.6 Summary of findings

The results from this analysis of the HES demonstrate that income-related patterns exist in the proportional expenditure allocated to some, but not all, healthy and unhealthy grocery foods within Australian households.

Households in the lower-income quintiles in the main sample allocated a greater share of their grocery expenditure to the aggregate group of healthy foods than did those in higher-income quintiles, with no discernible trend in expenditure allocated to the aggregate group of unhealthy foods. Within the main sample there were also clear negative trends found between income and proportional expenditure in the healthy food sub-groups of breads and cereals, core dairy foods and potatoes, as well as in the unhealthy food sub-groups of fats and oils and processed meats. In addition, a positive relationship was evident between income and proportional food expenditure allocation to the healthy sub-group of fruit. The general patterns of expenditure allocation in the primary school sub-sample were very similar across all sub-groups to those in the main sample of all households. However, the only relationship between income and proportional food expenditure that was statistically significant in the primary school sub-sample was that in the fats and oils sub-group.

The results presented in this chapter will be discussed in more depth in light of the both current literature and the quantitative research question and objectives in Chapter 8. Then, they will be discussed again together with the findings from the qualitative phase in order to draw mixed methods inferences in Chapter 9.
Chapter 5
Qualitative methodology and methods

5.1 Chapter overview

The qualitative phase of the current study sought to understand if, and how, consumer perceptions of value around healthy and unhealthy foods contribute to income-related differences in purchases of healthy and unhealthy foods. This phase therefore attempted to explore how individuals from high- and low-income backgrounds perceived the value in different foods when they shopped, and in particular how considerations of cost and nutrition were taken into account when making food purchasing decisions. This chapter outlines the research framework for this qualitative phase: the epistemology, methodology, conceptual framework and methods employed.

5.2 Methodology

5.2.1 A qualitative approach

The exploratory nature of this second phase of the study demanded that the research method enabled the discovery of new ideas and information, and encouraged the development of new theories. Qualitative methods are particularly useful for: investigating research areas that are previously unexplored, ill-defined or poorly understood (Britten et al. 1995; Patton 2002); describing phenomena in depth and detail (Britten et al. 1995; Johnson & Onwuegbuzie 2004; Patton 2002); as well as for illuminating potential causes of particular phenomena (Britten et al. 1995). Other qualitative studies have shown that these methods are useful for gaining insight into the social and cultural factors that influence decisions around food and that qualitative methods can further our understanding of household food choices by capturing their complexity, context and dynamics (Milburn 1995). As such, a qualitative approach was deemed the most appropriate for investigating the perspectives of shoppers around the concept of value, and how this might influence income-related food purchasing patterns in terms of healthy and unhealthy foods.
When undertaking qualitative research, it is important to be transparent and reflexive, to have an awareness of one’s own worldview and perspectives (Hunter et al. 2002), and to make these explicit so that readers of the research can make their own judgements about the validity of the claims being made. In taking a qualitative approach I have drawn on a variety of theoretical ideas. The following section outlines my general approach to the research problem and processes, describing the assumptions that underpin this qualitative study, as these shaped both the selection of methods and the ways in which I drew on social theory as the research process progressed.

5.2.2 A social constructionist approach to the research problem

The starting point for this study was the notion of consumer perceptions of value. Consumer perceptions of value are by definition highly personal and idiosyncratic (Zeithaml 1988). The value a particular item offers is perceived differently by different individuals and may also depend on the specific context of the purchasing situation. Social constructionism was therefore selected as the epistemological basis for this study. This approach positions meanings and understandings of ourselves, our world, the objects in it and the phenomena we experience as being created and perpetuated by human beings, who share meanings through being members of the same cultural or social group (Burr 2003). A social constructionist approach also stresses the importance of considering the historical and cultural specificity of our understandings of the world (Burr 2003). Perceptions of value around healthy and unhealthy foods in this context then, can be understood as being created and re-created through shared meanings among social groups or society more broadly, which are specific to the time and place in which the purchasing decisions are made.

5.2.2 A deductive/inductive approach to the research process

While the overall thrust of this phase of the study is exploratory, I approached it with a pre-conceived notion of value, which I wanted to use to explore the issue of how dietary inequalities are produced and reproduced. I therefore needed to carefully consider how I could design a study that sought to explore new territory, but not be blinkered by my pre-conceived concepts.
In describing how deductive and inductive approaches can be successfully employed together in qualitative research, Morse and Mitcham (2002) use the analogy of a skeleton to explain how a pre-existing concept, like consumer perceptions of value, can be used to guide the study design, and data collection methods of a qualitative study, while still leaving room for new ideas to emerge:

“From the concept analysis, we have some information about the essential characteristics or attributes of the concept, so we know where to direct our attentions but much still remains unknown. As an archaeologist does when discovering a skeleton, we knew roughly the shape of the original dinosaur—and perhaps even how it moved and worked—but we only had a general idea of its actual appearance.” (p. 32)

In this way, the broad concept of consumer value, well established in the fields of marketing and consumer studies, acted, for this study like a skeleton when placed in the field of public health. In order to gain new understandings of income inequalities in food purchasing patterns, I used this skeleton to guide the design of my study, in particular the data collection and the primary data analysis processes. Using this skeletal concept of value in this way, I was able to narrow the scope of the data collected, avoiding a broad and unfocussed ‘fishing trip’ (Morse & Mitcham 2002). At the same time, I was careful not to limit topics of inquiry strictly within the bounds of what was already known. I aimed to collect sufficient rich and relevant data around the concept of value so that new insights, that could not be predicted prior to entering the field, could emerge as a result of the research process, thus ‘fleshing out’ this skeleton by using inductive processes in the context of this previously unexplored field (Morse & Mitcham 2002).

It was in the later stages of the data analysis process that the inductive elements of the qualitative design came into play. It was at this point that I began to draw on other theoretical literature, guided by the ideas emerging from the early stages of the data analysis process (see p. 112). In order for this thesis to accurately reflect the evolution of my thinking, a full description of the theoretical literature I drew on in the inductive phases of this study appears at the beginning of Chapter 7 (Discourse analysis of the qualitative data). This location is fitting as I drew on this literature after the primary, descriptive data analysis had been completed.

The following section outlines the conceptual framework of consumer value that I used in a deductive way to inform the design and methods of this qualitative phase.
5.2.3 Conceptual framework

The conceptual framework that guided this study centres on how consumers may perceive value, or value for money, in items that are available for purchase. The framework is based on the work of sociologist Alan Warde (1997). This particular framework was selected as it fits well with the broader body of food choice literature as outlined and discussed in Chapter 2 (see p. 30). A brief overview of the framework is given below, as it was integral to the development of the data collection and analysis processes of this qualitative study.

The value framework consisted of three key concepts that together comprise how a consumer may perceive the value offered by an item for sale. These three concepts, and the way each was operationalised for this study are:

- **Exchange value**: The monetary and non-monetary costs associated with the purchase of a food item.

- **Use value**: The ability of the food item to fulfil the consumers’ needs. Examples of potential needs that foods may meet include functional (e.g., meeting nutritional needs), practical (e.g., being quick to prepare) or other needs (e.g., tasting good).

- **Identity value**: The way in which the item may contribute to consumers’ sense of identity. Foods may be considered to contribute to a person’s sense of their position in comparison to others, in terms of either the social structure or membership of a group, or contribute to their sense of self-identity (Warde 1997).

These concepts guided the development of the data collection tools, so as to ensure all concepts were explored with the research participants, and as a starting point for the data analysis process.
5.3 Purpose and research questions

The main purpose of this qualitative study was to gain an in-depth understanding of how people responsible for food shopping within their families perceive value in the foods available for purchase in their day-to-day contexts. In particular, it aimed to explore what the concept of value meant to participants when shopping for food, and how these perceptions of value influenced the mix of healthy and unhealthy foods they ultimately chose to purchase.

The qualitative research question that guided this research phase was:

*How do high- and low-income Australian consumers perceive value in healthy and unhealthy foods when they shop, and what role do the considerations of monetary cost and nutritional value play in these perceptions?*

The objectives were:

*Objective 2a: To describe how mothers of primary school-aged children perceive value when shopping for food items, and how considerations of monetary cost and nutritional value feed into these perceptions.*

*Objective 2b: To compare and contrast the ways in which mothers of primary school-aged children from high- and low-income backgrounds perceive value in food items, particularly in regards to the considerations of monetary cost and nutritional value.*

As discussed in Chapters 2 and 3, this research question and the related objectives were developed from my review of the current literature. It is important to note that as I undertook this qualitative phase of the study, I reflected on this research question and the objectives. I thought about what they meant for my data collection and analysis processes, whether my initial approaches to these tasks needed adjustments in order to best move towards answering these objectives, and importantly, whether the early findings from the data analysis indicated that the research objectives I had set prior to entering the field were going to lead to conclusions that would be useful in answering the overall research question.

The following section outlines how I conducted this qualitative phase, including points of flexibility, where I made small changes in response to the emerging demands of the study. The most important issue to note in regards to this reflexive approach, is the shift in emphasis that occurred within the second research objective (Objective 2b). During the data analysis process, it became obvious that the concept of income as an isolated socio-economic factor was not the most appropriate concept
with which to understand the social patterns emerging in the ways that participants perceived value around healthy and unhealthy foods. How these issues emerged, and how I responded to them are described later in this chapter and again, in depth, in the discourse analysis results presented in Chapter 7.

5.4 Methods

5.4.1 Interviews

Given the interest of this study in socially constructed meanings around value when food shopping, a research approach that allowed for the analysis of language and other symbolic forms was essential (Burr 2003). As food shopping is often primarily the responsibility of one person within a household and performed as a solo task, one-to-one interviews were selected as the primary data collection method. Using semi-structured interviews, information was gathered about key aspects of the participants’ perspectives of their food-related practices such as; their feelings, thought processes and intentions regarding their food purchases; specific behaviours associated with food purchasing that had occurred at previous points in time; and how the participants organised their world with regard to food and food purchasing and the meanings they attach to what goes on in that world (Patton 2002).

Additionally, one-to-one interviews provided an opportunity to explore issues with participants without the presence of peers who could potentially influence their responses (Liamputtong & Ezzy 2005). This was particularly relevant for the current study as it has been noted that in group situations, participants can be hesitant to speak about specific issues such as their own and other’s identities associated with food and eating (Bisogni et al. 2002).

5.4.2 Sampling

Broadly, this qualitative phase aimed to understand the perspectives of participants who bought food on behalf of their fairly ‘typical’ families from high- and low-income backgrounds. A stratified purposive sampling technique was therefore employed (Liamputtong & Ezzy 2005). The following section outlines the sampling frame, followed by a description of how I chose to access the target participants.
Characteristics of target participants

In order to best address the research questions and to ensure that income status remained a key explanatory factor in analyses of participant responses, it was essential to keep the other characteristics of target participants tightly focussed. As such, I aimed to recruit participants who were female, identified as the primary food purchaser within a two parent/carer household with at least one child of primary school age. The rationale for these criteria is outlined below:

- **Households with children** were selected as the target group for this study because of the problematisation of children and body weight in modern health and popular discourses. Children are seen as important targets of attempts to prevent obesity and fight the “war on fatness” (Coveney 2008, p. 208), and mothers are often portrayed as managers of this problem (Maher et al. 2010b). Households in which primary food purchasers were balancing their own wants and needs with those of their partners and children, were therefore likely to present rich settings for an exploration of economic, social and cultural influences on food purchasing decisions.

- **Households with children of primary school age (approximately 5-11 years old)** were particularly of interest as children of this age are subject to peer influences regarding food choices (Cullen et al. 2000), but have less autonomy around their food choices than do adolescents (Bassett et al. 2008; Warren et al. 2008).

- **Two parent households** were selected as these households represent the most common type of Australian families with children. In 2006 there were 1.6 million couple families with children under 15 years and 0.5 million single parent families (ABS 2006b). As this study was exploratory in nature, this ‘typical’ family context was reasoned to be an appropriate starting point for the examination of perceptions of value of different foods.

- **Mothers** were selected as target participants as women are more likely than men to be the main person responsible for food shopping within Australian households (Coveney 2002; Coveney & O’Dwyer 2009; (Newspoll 2005) as cited by *More men down the aisles!*’ 2005). Whilst including the views of partners and/or children can add to the richness of qualitative analyses in class based food research (see for example Coveney (2007) and Wills et al (2011)), the need to keep the current project manageable influenced my
decision to interview mothers alone. It was anticipated that this strategy would reduce the complexity of both the recruitment process and the logistics of organising interviews, and would make the data analysis process more straightforward. In addition, given the exploratory nature of this study, it was anticipated that interviewing mothers without other family members would help to maintain a tight focus on the key components of the value framework that informed the study.

Area-based approach for selection of recruitment areas

An area-based approach to recruitment was selected in order to reach high- and low-income families. When examining income distribution across Melbourne a general picture of geographical separation emerged (Moriarty 1998), with lower-income groups tending to be more focussed in the west, outer-north and north-western suburbs and some outer-suburban areas to the south and south-east of the central business district (see Figure 5.1). Higher-income groups tend to gravitate towards the inner and middle suburbs, particularly in the south and south-east, with substantial pockets in middle to fringe areas to the north-east, south-east and east of the central business district (see Figure 5.2)
Chapter 5 - Qualitative methodology and methods

In order to explore potential locations for the recruitment of high- and low-income participants, census data from the ABS was examined via CDATA online (ABS 2008a). Income data for couple (two parent) families with children were examined at both the ‘suburb’ or the slightly larger ‘local area’ levels. Microsoft Excel was used to calculate the percentages of households within each of the census income categories, and graphs were produced in order to visualise the patterns of household income distribution across different areas of Melbourne.

Initially, areas with a mix of both high- and low-income families were identified. However, upon examination of the other characteristics of these areas using QuickStats (ABS 2007a), it was difficult to locate an area that did not have high levels of other potentially complicating factors such as ethnic diversity or unemployment. Given my initial focus on income as a key factor of interest in food purchasing decisions, it was desirable to locate recruitment areas with levels of ethnic homogeneity and unemployment that were in line with the Australian population, as it was unlikely that these characteristics would be equally distributed between high- and low-income families within one area. It was therefore decided that
locating two separate areas, differing in average income, but similar in other respects would be more likely to produce two comparable participant groups.

The CDATA family income data was then re-examined, and typical patterns of income distribution for high- and low-income areas were identified visually through the creation of graphs of area level household income distribution. The demographic profiles of potential high- and low-income suburbs were appraised using Quickstats (ABS 2007a) in order to identify one high and one low income area that were similar in terms of total population, number of children and the number of families with children. The number of people born overseas and the number of people who spoke only English at home were also considered, with areas selected being close to the Australian average for those characteristics.

The income distributions for the two selected areas, Area A (low-income) and Area B (high-income), are shown in Figure 5.3, where the typical high- and low-income patterns can clearly be seen compared to the overall distribution for Melbourne. The relevant demographic details for each area are outlined in Table 5.1.

![Figure 5.3: Patterns of income distribution for households containing 'couple families with children' in Area A (low-income) and Area B (high-income) compared to the whole of Melbourne.](Note: Graph created using 2006 Census data (ABS 2008a).)
Table 5.1: Demographic profiles of Area A (low-income) and Area B (high-income) compared to the Australian population (ABS 2007a).

<table>
<thead>
<tr>
<th></th>
<th>Area A*</th>
<th>Area B*</th>
<th>Australian average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>35300</td>
<td>32700</td>
<td>-</td>
</tr>
<tr>
<td>Distance from the CBD</td>
<td>~40 km</td>
<td>~10 km</td>
<td>-</td>
</tr>
<tr>
<td>Families with children</td>
<td>4550</td>
<td>4400</td>
<td>-</td>
</tr>
<tr>
<td>Children aged 5-14</td>
<td>5800</td>
<td>4000</td>
<td>-</td>
</tr>
<tr>
<td>Australian citizens</td>
<td>~85%</td>
<td>~85%</td>
<td>86.1%</td>
</tr>
<tr>
<td>Born overseas</td>
<td>~22%</td>
<td>~22%</td>
<td>22.2%</td>
</tr>
<tr>
<td>People who speak only English at home</td>
<td>~80%</td>
<td>~80%</td>
<td>78.5%</td>
</tr>
</tbody>
</table>

*Data for Areas A and B have been rounded to conceal their exact locations.

5.4.3 Recruitment of participants

Recruitment procedures

Participants were recruited via the distribution of flyers inviting local mothers to volunteer for the study (see Appendix D). The distribution of flyers through local businesses and community organisations took place early in the recruitment phase. A selection of small businesses, located in key shopping precincts, such as local chemists, cafes, retail stores and community fitness centres gave permission for flyers to be left in view of their customers. The number and types of shops selected were balanced between the two areas. In each area, one large community support organisation and one church with an active interest in food and community services were also identified and approached to assist in volunteer recruitment. In these settings, I met with a lead staff member to explain the purpose of the study and what the study would entail for prospective participants. It was up to each organisation how they chose to distribute the flyers and communicate this information within their communities. There was no further information about who did or did not participate in the study shared between me and these staff members.

The distribution of flyers via a letterbox drop was carried out in small bouts over the course of the data collection phase. A new letterbox drop was conducted each time further participants were required. Locations for the letterbox drops were planned using the ABS census data at the census collection district level (CCD). A CCD is a small geographical area delineated by the ABS with each area containing...
approximately 220 households (ABS 1999). Data regarding the number of couple families with children and their income distribution were examined for all CCDs within Area A and Area B. In order to maximise the number of potential participants receiving the flyers, the following criteria were used, in order, to select CCDs for the letterbox drops:

- CCDs containing the greatest number of couple families with children within the study area.
- Of these, CCDs with an income distribution that reflected that of the total area:
  - Area A - 45% or more of households earning less than $1200 per week gross household income and no more than 25% of households earning more than $1700.
  - Area B - 75% or more of households earning above $1700 per week gross household income.
- Of these, CCDs that were geographically separate from each other to ensure the CCDs selected for letterbox drops were spread across the recruitment areas.

In Area A, participants who volunteered for the study reported that they heard about the study either through the church contact person, flyers left in local businesses or the letterbox drop. Almost all participants recruited in Area B reported hearing about the study via the letterbox drop.

**Monitoring the characteristics of the sample**

Potential participants were screened to ensure they met the basic criteria for the study when they initially responded to the recruitment flyers (see p. 95). I also checked that they lived within the designated study area and ascertained the number and ages of their children. Having selected recruitment areas based on income distributions of the target group, I did not screen for income when first entering the field. I felt that discussion of issues around income prior to participation in the study may have deterred potential participants. In addition, using income cut-offs as an eligibility criterion was likely to be problematic, as other factors such as family size or other financial commitments may also affect a household’s level of disposable income and therefore the amount of money that is allocated to the household food budget.
Instead, I chose to monitor the household income characteristics of the participants as they were interviewed, with the plan that if a significant number of participants did not fall within the expected income bands, I would then start to screen subsequent participants when they first made contact with the research team. Only two participants of the final sample from Area A had household income above the two lower income bands, and one participant from Area B had a household income below the two upper income bands (see Table 5.2 for more details of the sample). Therefore no screening for income was deemed necessary.

While many of the other characteristics of the participants were tightly bounded, the inclusion criteria of having at least one child of primary school age allowed for some variation within the sample. In order to capture a broad range of experiences within this group, I aimed to recruit participants with both small and large families, as well as participants with other children who were either older or younger than primary school age. I monitored these factors as the study progressed to ensure the sample within each area was reasonably balanced. I did need to screen out some families in the later stages of recruitment due to an excess of families with four or more children in Area A, and too many families with only two primary school-aged children only or with one primary school-age child and younger siblings in Area B.

**Sample size**

For this study, the target sample size was based on two key considerations:

- How many participants would be needed to elicit sufficient information to allow the research questions be thoroughly addressed (Mason 2002)?

- How many interviews were feasible given the time and resource constraints (Patton 2002)?

Based on the literature in this area, it seemed reasonable that data saturation around one broad area of inquiry would be achievable with an initial target of between 10 to 15 participants from each area (Guest et al. 2006). Recruitment was ceased after 11 interviews had been conducted in each area as it was ascertained that no new codes or categories were emerging in the latter interviews, and the vast majority of the new data being generated fitted well with the established coding scheme (Guest et al. 2006).
5.4.4 The sample

The final sample consisted of 22 mothers, 11 each from Area A and Area B. Table 5.2 below outlines the demographic details of the sample. A more in-depth description of the participants appears in Chapter 6.

Most families had between two and four children covering a range of age groups. Levels of household income were in line with overall income level for each area. Post-school education levels were in line with the income profile of each area, with the majority of participants and their partners in Area A having no post-school qualifications or vocational training, and the majority of participants and partners in Area B having a diploma, bachelor or higher university degree.

The majority of participants from each area owned a house with a mortgage, with four families from Area A (low-income) renting and one who owned their home outright. In Area B (high-income) the opposite distribution was present with four families owning their home without a mortgage and only one renting. In terms of employment, all families had the male partner in full-time work (or equivalent hours of casual work). Just under half the participants from each area worked themselves in a part-time capacity, with similar numbers who undertook full-time home duties. One participant in Area A and two from Area B worked full time, while the remaining one participant from Area A was on maternity leave at the time of interview.
Table 5.2: Demographic details of the qualitative study sample

<table>
<thead>
<tr>
<th>Sample characteristics</th>
<th>Area A</th>
<th>Area B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of participants</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Number of children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 child</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>2 children</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>3 children</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4 children</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5 children</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Ages of children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preschool and primary</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Primary only</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Primary and high school</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Self-reported ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australian</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Income quintile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Highest</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Housing tenure</td>
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<td></td>
</tr>
<tr>
<td>Private rental</td>
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<td>1</td>
</tr>
<tr>
<td>Owner with mortgage</td>
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<td>6</td>
</tr>
<tr>
<td>Owner without mortgage</td>
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<td>4</td>
</tr>
<tr>
<td>Participant's highest level of education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No post-school education</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Vocational training</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Diploma</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Bachelor degree or higher</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Partner's highest level of education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No post-school education</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Vocational training</td>
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<td>1</td>
</tr>
<tr>
<td>Diploma</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bachelor degree or higher</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Participant's current employment status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Duties</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Maternity Leave</td>
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<td>0</td>
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<tr>
<td>Part-time employment</td>
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<td>5</td>
</tr>
<tr>
<td>Full-time employment</td>
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<td>2</td>
</tr>
<tr>
<td>Partner's current employment status</td>
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<td></td>
</tr>
<tr>
<td>Full-time employment</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Casual working full-time hours</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
5.4.5 Data collection

The interview process

A single semi-structured interview lasting approximately 60 to 90 minutes was conducted with each participant. Whilst it was hoped that interviews would be conducted within participants’ homes, this was not possible due to concerns held regarding interviewer safety by the Deakin University Human Ethics Committee. All interviews therefore took place in a neutral location such as a private room in a community centre or library. I had identified various potential locations for the interviews in both study areas, but the exact time and place for the interview was negotiated with each participant in order to ensure it was convenient to them.

All participants were compensated for their time with a $20 gift voucher for a major retail chain. To ensure that responsibilities for young children were not a barrier to participation, an additional $10 gift voucher card per child was provided to mothers who needed to organise childcare to attend the interview. Young infants were welcome to attend interviews. In three cases, older children did attend the interviews sessions due to last minute changes in circumstance. Toys were provided for these children, and it was not felt that the presence of these children significantly affected the conduct of those interviews.

An audio recording of each interview was taken with specific consent from all participants. I used an Olympus VN-240PC digital voice recorder to record the interviews. Immediately after each interview I took field notes, recording information about the context of the interview, my thoughts and reflections on the interview as a whole and any discussion relevant to research question that occurred before or after the voice recording. These contextual notes were reviewed throughout the analysis process as they comprised an important part of the research data (Green et al. 2007).

The interview schedule

A semi-structured interview schedule, using a loose structure of open-ended questions, guided each interview. Using a semi-structured interview technique ensures that the same core questions are asked of each participant, while maintaining flexibility within the interview schedule, thus allowing for exploration of other, unanticipated ideas raised by participants (Britten et al. 1995). My interview schedule was based on the qualitative research question and objectives, as well as the
conceptual framework. Therefore, the interview schedule was designed to elicit discussion around participants’ perceptions of value when making food purchases and how the elements of exchange value, use value and identity value (Warde 1997) may have influenced their food purchasing decisions.

The interview process was pilot tested on three volunteer participants recruited informally prior to entering study Areas A and B. Only minor changes were required following the piloting process, such as refining the wording of some questions and prompts. During the interviews, participants did not appear to have any difficulties in recalling their regular food shopping purchases. A copy of the full interview schedule is included in Appendix E, but broadly, there were three key sections of the interview:

Part One (approx. five minutes): During the first part of the interview, I asked the participant to ‘introduce’ me to the different members of their household, by providing me with their names, ages and other pertinent information such as their place in the household unit. I started with these questions as they eased the participant into their role as informant, and helped establish the context for the rest of the interview.

Part Two (approx. 35 to 65 minutes): The main section of the interview focussed on the types of foods that the participant usually bought. First, I asked each participant to guide me through their usual shopping routine. Participants were invited to structure the discussion in any way that made sense to them (such as the way they moved through their supermarket or shops, or the way they structured their shopping list). As they guided me through their shopping experiences we discussed their thoughts about why they chose the items they mentioned and how the foods were used, as well as which foods were less likely to be bought, and what it was about these foods that dissuaded their purchase.

Following this, I employed a photo elicitation technique (Harper 2002) as an additional tool to prompt discussion around food shopping and identity, as previous research around food and identity suggests that direct questioning around identity and food does not necessarily elicit useful responses (Bisogni et al. 2002). Therefore, in an attempt to elicit discussion around identity value, participants were shown four photographs of different shopping trolleys containing groceries, and were asked “Whose shopping trolley might this be?” Participants were prompted to discuss the ‘types’ of people (e.g., What kind of family?) they thought may purchase each
trolley of goods, or specific items within the trolleys, and why. The four photographs used are described in detail in the next section.

**Part Three (approx. 10 to 20 minutes):** The final part of the interview consisted of additional questions about eating out and the purchase of take-away foods, the participants’ overall satisfaction with their food shopping purchases and some direct questions about their ideas around the meaning of ‘good value’ when food shopping. In addition, I referred to a list of foods available in a typical supermarket to ensure that we had covered most types of food items that families might purchase. At the end of each interview, with the audio recorder switched off, I asked a series of background questions including information about their ethnicity, educational background, employment, housing tenure, financial status and cultural activities (see Appendix F). These questions helped to locate the each participant in relation to whole sample (Patton 2002).

**Shopping trolley photographs**

Carefully planned, professional photographs of four hypothetical shopping trolleys containing different grocery bundles were used as a discussion prompt during the interviews.

The main aim of using the photographs of these hypothetical shopping trolleys was to elicit information about participants’ perceptions of the ‘identity value’ they associated with different food items. As identity value was an abstract concept, I hoped that the introduction of the photographs as prompts would help to indirectly access participants’ ideas about what kinds of food they associated with both themselves and others. I deliberately chose to introduce photographs that I had taken, rather than ones they had taken, with the expectation that participants might more openly discuss both positive and negative opinions about different foods items if they did not feel that they were personally ‘linked’ with the food items being discussed. Most importantly, the photographs contained a wide range of food items, so that it was unlikely that any participant would regularly purchase all the items pictured. Therefore it was hoped that the photographs would provide each participant with a ‘spectrum’ of both familiar and unfamiliar foods that, through discussion of their own and others’ shopping habits, they could use to position themselves in relation to ‘others’.

The images constructed for each of the hypothetical trolley photographs consisted of a supermarket trolley filled with typical groceries that might be
purchased for breakfast, lunch, dinner, dessert and snacks by a family with primary school-aged children. In constructing these four bundles of food items, I aimed to represent four different ‘ways of shopping’ in terms of the cost and nutritional values of the foods selected. Therefore, the key factors of cost and health value of foods were varied across the four trolleys, so that one trolley contained predominantly cheaper and relatively healthy items while another contained predominantly more expensive and relatively unhealthy items and so on (see Figures 5.4 to 5.7). It is important to note that a range of all types of items (i.e., some low-cost and high-cost and some more-healthy, some less-healthy) were included in each trolley to ensure that the bundles of groceries in the photographs represented choices that families might realistically make on a regular shopping trip.

When selecting items for inclusion in each trolley, the cost and health values for each item were considered in relation to other foods within the relevant product category. For example, a tub of yoghurt could be a premium or branded product (high/average cost) or a generic brand (low cost), it could also be a full-fat product (average/lower health value) or a reduced fat and/or reduced sugar product (higher health value). As demonstrated in this example, the health values of food items were judged according to the recommendations for healthier choices according to the AGHE (Smith et al. 1998). For fruit and vegetables, all items were considered to be healthy options, and judgements were not usually made about the cost of these items, as in most cases, the price of fruits and vegetables would not be immediately obvious to participants viewing the photographs. Tables 5.3 to 5.6, that appear below each of the trolley photographs on the following pages, provide descriptions of the contents of each trolley.

Online supermarket websites were used to construct a shopping list for each trolley prior to the purchase and photographing of the food items. Each bundle of groceries was purchased from one of the four large Australian supermarket chains (Coles, Woolworths, IGA or Aldi), to ensure that a variety of private/generic and national label branded foods appeared in the photographs. For use within the interviews, A4 sized copies of the photographs were printed and laminated, and each labelled with a letter from A to D in order that the trolley being discussed could be identified when reading the interview transcripts. All four photos were presented at the same time, and participants were invited to start the discussion using whichever photograph they preferred. The photos are reproduced below (see Figure 5.4 through 5.7) and details of the purchased food products are included in Appendix G.
### Table 5.3: List of items contained in Trolley A indicating their relative cost and health values

<table>
<thead>
<tr>
<th>Trolley A- Woolworths supermarket</th>
<th>Relative cost</th>
<th>Relative health value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>Av/High</td>
</tr>
<tr>
<td>Breakfast</td>
<td>Milk, Cereal</td>
<td>2</td>
</tr>
<tr>
<td>Lunch</td>
<td>Bread, Roast chicken, Mayonnaise, Butter</td>
<td>1</td>
</tr>
<tr>
<td>Dinner</td>
<td>Beef Lasagne, Garlic bread</td>
<td>1</td>
</tr>
<tr>
<td>Fruits/veg</td>
<td>Spinach, Cherry tomatoes, Bananas</td>
<td>3</td>
</tr>
<tr>
<td>Snacks</td>
<td>Cheese twist snacks, Cereal bars, Biscuit and cheese snacks</td>
<td>3</td>
</tr>
<tr>
<td>Dessert</td>
<td>Ice cream, Apple crumble</td>
<td>2</td>
</tr>
<tr>
<td>Drinks</td>
<td>Chocolate milk</td>
<td>1</td>
</tr>
</tbody>
</table>

| Total count | 2 | 12 | 3 | 14 |
Table 5.4: List of items contained in Trolley B indicating their relative cost and health values

<table>
<thead>
<tr>
<th>Trolley B- Coles supermarket</th>
<th>Relative cost</th>
<th>Relative health value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>Av/High</td>
</tr>
<tr>
<td>Breakfast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Cereal, Peanut butter</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Lunch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bread, Strassburg, Margerine</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Tomato sauce, Vegemite</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Dinner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sausages, Frozen chips</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Gravy mix</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fruit/veg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frozen peas and corn</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Apples</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snacks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multipack chips (crisps)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Biscuits</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Dessert</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frozen Cheesecake</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Drinks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coke zero</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total count</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>
Figure 5.6: Photograph of Trolley C which contains relatively expensive and more healthy food items

Table 5.5: List of items contained in Trolley C indicating of their relative cost and health values

<table>
<thead>
<tr>
<th>Trolley C- IGA supermarket</th>
<th>Relative cost</th>
<th>Relative health value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cereal</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Honey, Vegemite</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Lunch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bread, Tuna</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Dinner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noodles, Stirfry sauce</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Chicken breast, Oil</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Fruit/veg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onion, Capsicum, Broccollini, Carrots, Lettuce, Pears, Grapes Tomato (truss)</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Snacks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cruskits, Sultanas</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Dessert</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frozen berries</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Yoghurt, Chocolate</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Drinks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange juice</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total count</strong></td>
<td><strong>1</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>
**Chapter 5 - Qualitative methodology and methods**

Figure 5.7: Photograph of Trolley D which contains relatively cheap and more healthy food items

Table 5.6: List of items contained in Trolley D indicating their relative cost and health values

<table>
<thead>
<tr>
<th>Trolley D- Aldi supermarket</th>
<th>Relative cost</th>
<th>Relative health value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Strawberry jam, Milk</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Lunch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bread, Cheese, Ham</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Dinner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spaghetti</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Minced meat, Oil</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Canned tomatoes</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fruit/veg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carrots, Zucchini, Onion, Oranges, Bananas</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Snacks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice crackers</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Cereal bars</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Dessert</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chocolate dairy dessert</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Drinks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange juice</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Total count**

|                | 12 | 2 | 14 | 5 |

111
5.4.6 Data analysis

Data analysis began alongside the early stages of the data collection process which allowed for the refining of the interview questions and pursuing emerging avenues of inquiry as the interviews progressed (Pope et al. 2000). My general approach was based on the four step process as described by Green et al. (2007) and illustrated in Figure 5.8.

![Figure 5.8: Four steps of data analysis to generate best qualitative evidence, adapted from Green et al (2007)](image)

While overall, the data analysis proceeded over time from step one through to step four, this process was not entirely linear. Rather, I moved back and forward between the steps in order to find the meaning within the data (Hunter et al. 2002). A detailed account of each step of the data analysis process is outlined below. Words such as ‘coding’ and ‘categorising’ are often used interchangeably in qualitative research, I therefore explain my application of this terminology for each the analytical steps below. An amended version of the above Figure is presented on p. 117 showing the specific input and outputs that were used in the data analysis process.

The data analysis process

**Step 1: Data immersion**

The first step, data immersion, has been described as starting point for the ‘incubation’ processes necessary when analysing qualitative data (Hunter et al. 2002). It is in this immersion phase, where a researcher begins to reflect deeply on the data collected. For me, this phase initially involved transcribing the interviews from the audio recordings, and then reading through each completed transcript two or more times and reviewing my field notes. I chose to transcribe all interviews myself, rather than to use an external transcription service in order to fully understand and appreciate the nature and tone of the interviews.
Conducting a semi-structured interview requires intense concentration in order to both attend to what the participant is saying but also to think ahead and guide the discussion. Immersing myself in the data through transcribing and re-reading of the transcripts therefore provided an opportunity to listen more carefully to the participants’ stories from their points of view, to and to think more deeply about their constructions of themselves as subjects, and their perceptions of value through their everyday food shopping practices. To achieve this, I employed specific techniques such as listening/looking for places where participants used certain ‘loaded’ (e.g., moral) language or reflected back on their own statements, and assessing the logical flow of their narratives (Anderson & Jack 1991). I frequently returned to this data immersion step during later stages of the data analysis process to reconsider the data from different angles and to aid the development and incubation of new ideas (Hunter et al. 2002).

**Step 2: Coding**

The process of coding in this study involved applying labels to discrete sentences, phrases or paragraphs of the interview transcripts, with careful consideration of the context in which they were speaking (Green et al. 2007). These labels captured the key ideas expressed each section of text. The coding process began when the first few interviews had been transcribed and I felt familiar with this early data. Over time, the coding scheme was slowly built up, and was revised as subsequent transcripts were added. The whole process was guided by the aim of understanding how participants constructed notions of value around their food purchases.

The inductive/deductive nature of my analysis was evident in this coding process. The concepts of exchange, use and identity values were used to interrogate the data, but I also created codes that captured other relevant ideas that did not fit in with this preconceived framework. It wasn’t clear at this early stage how or where these ideas fitted within the broader picture of participants’ perceptions of value, but creating codes around these emergent concepts and ideas kept them accessible for later stages of the analysis.

Throughout this stage of data analysis, I collaborated both formally and informally with my supervisors to clarify my ideas and to validate the coding scheme. In order to cross check my coding strategies and interpretation of the data (Barbour 2001), two supervisors independently coded some sections of selected transcripts. Our respective coding results were compared and discussed at research
meetings. Appropriate refinements were then made to the coding scheme, before I presented the final scheme to the supervisory panel, with my decision-making processes illustrated using quotes from the transcripts.

**Step 3: Creating categories**

Green and colleagues (2007) describe the task of creating categories as grouping together codes that are linked, share a relationship or fit well together. I thought of this step as taking the small pieces of the data puzzle (codes) and joining them together to create some larger, useful chunks (categories) which gave a more distinct structure to my data (Seidel 1998).

This process of creating categories was an inductive one. As described above, coding began by utilising concepts from the pre-existing value framework, but the emergence of codes that did not easily fit within the bounds of these concepts meant that a new overarching structure needed to be developed. Creating categories therefore entailed making multiple attempts at explaining how all the codes could be understood to fit together, until a satisfactory set of categories was developed which described the ‘big picture’ of participant perceptions of value. To do this, I examined the codes from a range of perspectives focusing on the different ways that they could be seen to relate to each other, discussing the possibilities with my supervisors and writing research notes to develop my ideas. The final explanatory framework that was developed consisted of three categories (perceptions of food items, food practices and food responsibilities) which together captured and clarified the relationships between all relevant codes and provided a clear picture of the data relating to participant perceptions of value.

The output from this step of the data analysis process was a descriptive analysis of the data which is presented in Chapter 6 (see Figure 5.9).

**Step 4: Identifying themes**

The stage of identifying themes, moving from description to interpretation, or explanation (Green et al. 2007), has been described as the ‘aha’ of the qualitative research process: the making of meanings beyond facts. It is well established that in order to reach this higher level of understanding the researcher must be willing to allow sufficient time, take risks, tolerate ambiguity and persevere (Hunter et al. 2002).
At this stage I began to focus on the strong notions of moral priorities and responsibilities that were evident in the talk of all participants as they discussed value when food shopping. For example, foods were often positioned as ‘good’ or ‘bad’, food shopping and preparation practices were talked about in terms of being ‘proper’ or ‘correct’. Participants also referred to the responsibilities around food that they felt were placed on them, and that they in turn placed on other women, in their positions as ‘mothers’ and ‘providers’ within their family units.

To identify themes within this data, to make sense of how these moral notions might contribute to an explanation of different perceptions of value, I returned to the theoretical literature (Willis et al. 2007) in order to link my emerging ideas back to social theory (Green et al. 2007). Such constructions of a morality, or moralities, of food purchasing and notions of the ethical conduct of the self and others pointed to an understanding of these food shopping practices as part of the ‘government’ of society, or the ‘conduct of conduct’.

It was at this stage that I turned to the theoretical work of Michel Foucault, and the task of identifying themes developed into that of undertaking a discourse analysis. I drew on Foucault’s writings about governmentality (Foucault 1991) and the ethics of the self (Foucault 1997) to further explore the issues of morality and responsibility that were raised by participants in the interviews. I drew on this work to build an explanation for the different perceptions of ‘good value’ that were constructed by this diverse participant group, as they described their family food shopping experiences.

There is no prescribed way of undertaking a discourse analysis, but there are several ‘entry points’ that can be utilised (Arribas-Ayllon & Walkerdine 2008). Given that women’s perceptions of themselves in a variety of roles were evident in the data, I revisited the transcripts with the new aim of identifying the range of the subject positions that were evident in the participants’ talk. Foucault’s understandings of discourse and the self point to ways in which individuals ‘put themselves together’, or construct themselves as subjects from the materials and meaning that are ‘on offer’ or available to them in various popular and professional discourses (Miller 2008). Identifying subject positions thus opened up the interview data in a way that allowed for the investigation of the cultural repertoire of discourses that was available to the participants (Arribas-Ayllon & Walkerdine 2008)
As the second objective for this qualitative research phase, Objective 2b, was to understand how income impacted on participant perceptions of the value in foods, the different ways in which participants drew on the available discourses when constructing themselves as subjects became the focus of the discourse analysis. By examining the data produced by each participant, I started by ‘mapping’ the range of ways in which the participants constructed themselves. To identify the relationship between income and the ways of constructing the self, I then considered each participant’s unique way of drawing on discourse to construct themselves in the various subject positions, in light of their household demographic information. While it appeared that complex social patterns were evident in participants’ perceptions of value, income on its own was found to be an inadequate concept with which to explain these patterns. At this point, I therefore needed to investigate socio-economic factors beyond income, which shifted the focus of this last research objective away from the narrow concept of income. I once more returned to the literature seeking other explanations for why participants might draw on discourses in different ways. A broader conceptualisation of ‘resources’ appeared to be more useful than income alone, and therefore I drew on Pierre Bourdieu’s writings around capital and habitus (Bourdieu 1984) in order to unpack the social patterns evident in the discourse analysis.

**Structuring the output from my analysis**

In order to adequately and efficiently address the qualitative research question and objectives, it was important to develop a logical structure for presenting the results of the qualitative data analysis. My understanding of the four step analysis process helped me to define this structure. The two-tiered structure, comprising of primary and secondary analyses is illustrated in Figure 5.9.
Chapter 5 - Qualitative methodology and methods

Discourse analysis

Chapter 7

Descriptive analysis
Chapter 6

Secondary analysis 'output'

Primary analysis 'output'

Step 1: Data immersion
Step 2: Coding
Step 3: Creating categories
Step 4: Identifying themes

Theoretical inputs- deductive stage
Original concepts and theories- see Chapters 2 and 5

'Three' and 'unhealthy' foods

'Value' framework (Exchange, use and identity values)

High and low income

Theoretical inputs- inductive stage
Additional concepts and theories- see Chapter 7

Governmentality and the ethics of self

Habitus and capital

Figure 5.9: Four steps analysis process illustrating the deductive and inductive theoretical inputs and two-tiered output structure. Adapted from Green et al (2007)

The output from the primary data analysis process was a descriptive analysis which is presented in Chapter 6, and worked towards answering the first of the two qualitative research objectives. This descriptive analysis broadly describes how the diverse group of participants perceived value in the range of food items they considered for purchase, with attention paid to the role of cost and health considerations within these perceptions. On their own, purely descriptive analyses such as these are a ‘low’ level of qualitative analysis (Daly et al. 2007) but in this case, it formed an important foundation for the secondary analysis.

The ‘higher’ level, secondary data analysis, in this case a discourse analysis, appears in Chapter 7. This chapter begins with an overview of the theoretical literature which formed the foundation for the final stage of data analysis. The chapter then attempts to answer the second (revised) qualitative research objective, focussing on how participants from different socio-economic backgrounds perceived value around foods, with a particular focus on the specific roles that perceptions of monetary costs and nutritional value played as participants constructed their perceptions of value when food shopping.
5.4.7 Ensuring rigour in the qualitative research process

As with all research, issues of rigour, or quality, are vital when undertaking a qualitative study. Given the ontological, epistemological and methodological foundations of qualitative research, the concepts of reliability and validity are applied differently in qualitative compared to quantitative studies (Liamputtong 2013; Tobin & Begley 2004). Qualitative researchers tend to avoid the use of the concept of reliability to emphasise the consistency and repeatability of results (Sarantakos 2005). As qualitative studies, and in particular discourse analyses, are based on descriptive data that is unique to specific historical, social and cultural contexts, it is unlikely that qualitative findings can be rigidly replicated (Liamputtong 2013). Instead, qualitative researchers have a responsibility to ensure their process of research is logical, traceable and clearly documented (Tobin & Begley 2004).

Validity, which deals with the fundamental question of whether your findings are plausible and will be received as a credible explanation, or interpretation of the phenomenon under examination, is important in qualitative inquiry, but is more often described as ‘trustworthiness’ ‘credibility’ or ‘authenticity’ (Sarantakos 2005). While several checklists of criteria have been developed to judge the rigour or trustworthiness of qualitative studies, some argue the dangers of relying only on assessments of quality once a study is completed (Barbour 2001; Morse et al. 2002). Qualitative rigour, in this light, is not seen as a specific entity which can be easily achieved (Hesse-Biber & Leavy 2011), rather it is something that is developed through the use of a range of constructive strategies and procedures, subtly and incrementally, throughout the course of a study (Barbour 2001; Morse et al. 2002). In this way, producing a rigorous qualitative study can be understood as a “process whereby the researcher earns the confidence of the reader that he or she has ‘gotten it right’” (Hesse-Biber & Leavy 2011, p. 48).

In undertaking this study, I employed a range of both explicit and implicit strategies in an attempt to ensure methodological rigour. Many of the explicit techniques have been identified above, such as using a purposive sampling strategy, a systematic process of interrogating the data from all participants in relation to the research questions, and challenging and refining my data analysis through discussion and collaboration with my supervisors.

However, the most important, but subtle strategy I employed to ensure rigour in this qualitative phase was that of investigator responsiveness (Morse et al. 2002;
Popay et al. 1998). Throughout this chapter, I have pointed to the ways in which I responded to some specific challenges that arose during this research phase, and how I made certain decisions in order to adapt the qualitative data collection and analysis procedures to meet the requirements of the research questions and objectives. For example, my inductive approach to this qualitative phase meant the theories I selected to apply in the later stages of the data analysis process were chosen based on the findings that emerged in the earlier stages. Similarly changing the focus of the second objective for this study, from income to resources more broadly, ensured that the conclusions from this work would be well connected to the overall purpose. Revising this objective, and consequently adapting my data analysis and interpretations in this way was an important step in building the methodological coherence of the study (Morse et al. 2002).

Finally, in writing this thesis I have aimed to be transparent and present a rich description of the research settings, participants, the data and my interpretations of it. Presenting a detailed account of the research context and processes in this way, enables readers to judge the quality of this research, and the potential transferability of the findings to other contexts (Liamputtong 2013). But most importantly, providing a rich description of the participants’ accounts of their food shopping practices and perceptions of value, allows others to assess how well my interpretations are supported by the data (Liamputtong 2013; Lupton 1992).

5.4.8 Ethical considerations

*Ethics committee approval and informed consent*

This qualitative study was reviewed and approved by the Deakin University Human Research Ethics Committee (Project ID- HEAG-H 134/09). Written consent was obtained at the start of each interview after the participant was given: an opportunity to read the plain language statement (see Appendix H); a brief verbal description of how the interview would proceed; and an opportunity to ask questions. Where practical, participants were sent or emailed copies of the participant information and consent forms prior to the interview appointment.
All written documents used to communicate with participants were approved by the Human Research Ethics Committee prior to distribution. These documents included recruitment flyers (see Appendix D), covering letters for the transcript review process (see Appendix I) and a brief summary of the overall descriptive results (see Appendix J).

**Privacy and confidentiality**

Storage of participants’ personal contact details were kept in password-protected files on a secure university computer server. All demographic forms were labelled only with a participant code, and the hard copies of participant details were securely stored separately from those of the interview transcripts and contact information.

Once transcribed, the real names of all participants and their family members and/or friends were replaced with pseudonyms to protect the privacy of participants and their families. Pseudonyms were also used for all local place names to ensure the location of study areas remained concealed. Any business names mentioned by participants were also changed if they were smaller businesses that could be used to identify the study locations. For example, the names of small, independent fruit shops were changed, but those of large businesses found across all areas of Melbourne (such as McDonalds fast food restaurants) were not.

**Transcript review process**

All participants were offered a chance to review the transcript of their interview for accuracy and privacy. Transcripts were either emailed or posted to the seven participants who did elect to see a copy. Participants were invited to contact me if they felt unhappy with any part of the transcript for any reason and/or did not want specific sections included as part of the study (See letter Appendix I). Only one participant requested that minor changes be made regarding some personal health information that was discussed during the interview, and those changes were made to her satisfaction. No participant requested that their transcript be withdrawn. This process was not used as an opportunity to add to or alter the content of sections of the interview that were not of concern to the participant.
Informal ethical issues

When presenting myself to participants, I was bound to use the formal documents (as above) to inform them of who I was and my purposes in conducting the research study. Whilst it was compulsory to note my affiliation with the School of Exercise and Nutrition at Deakin University, I did however try to minimise any references to ‘health’ or ‘nutrition’ both within those documents and in any verbal explanations of the project that I gave participants during the interview. I also tried to downplay my aim of comparing responses between high- and low-income participants, and instead described the work as seeking the views of a ‘diverse range of mothers’ (see Appendix D). These decisions were made in order to minimise the likelihood that participants would over-emphasise issues relating to health or finances when discussing their food shopping habits.

Downplaying information in this way can be understood as a form of deception in the context of social research and, as Goode (1996) points out, there is some ethical risk associated with research projects that use even mild forms of deception. My approach here therefore raised some important ethical questions that were considered in the project design phase. The main question related to the ethics of representation: Was there a risk to my participants who may be represented in the reports of this study as members of ‘lower income’ groups, particularly if they were not aware of playing that role in comparison to others?

As Goode (1996) argues, it is easy to conflate true risk to participants, with a risk of causing offence. These issues were discussed in supervisory panel meetings and it was decided that it was unlikely that any harm would come to the participants in my study because of these issues, particularly as their identities remained anonymous and that reporting would be sensible to this ethical challenge. In order to minimise any risk of offense or harm, care would therefore need to be taken to present results in a truthful but considerate way. I would make every attempt to ensure that no participants were cast in an overtly negative light within reports of the study, and to present all participants’ situations in an empathetic manner.
Chapter 6
Descriptive analysis of the qualitative data

6.1 Chapter overview
This chapter presents the results of the primary, descriptive analysis of the interviews conducted with high- and low-income mothers that formed the qualitative phase of the current study. This descriptive analysis was undertaken in order to fulfil the first qualitative objective, and therefore explored how participants broadly constructed their perceptions of value in the food items they encountered in their regular shopping routines. A brief overview of the food shopping landscapes that existed in each recruitment area and the participants themselves is first presented to establish the contexts within which interviewees carried out their shopping and other daily activities. The descriptive account of the interview data that follows is structured around the three major categories that emerged from the data analysis process: the characteristics of the items participants encountered when shopping; the practices they performed on, or with those items; and the responsibilities that they felt were connected to being the primary food shopper for a family.

6.2 Description of the study areas and participants

6.2.1 Food shopping landscapes
A food shopping landscape refers to the kinds of food retail businesses in an area. In particular, it describes the food shopping opportunities available to residents. In the study areas, food landscapes were typical for urban Australia. Almost all participants reported purchasing the majority of their family food from either of the two major supermarket chains, Coles and Woolworths (previously called Safeway). Nationally, these two retailers together accounted for approximately 80% of total grocery sales in 2010 (Supermarket shootout: Will the independents survive? 2011), although their combined market share for fresh foods is substantially lower at about 45-50% (Australian Competition & Consumer Commission 2008; Mortimer 2013). Some participants within each area also reported shopping at Aldi, a large chain of discount supermarkets, as well as at smaller independent supermarkets. In addition, a variety of smaller, specialty retailers such as fruit and vegetable shops, butchers,
delicatessens and bakeries were used by many participants, but more heavily by Area B participants. Some of these were stores were national franchises (particularly the bakeries: ‘Bakers Delight’ and ‘Brumbies’), but many were small local chains or independent stores.

More unique to Melbourne are large suburban food markets that encompass a wide range of small shops and stalls; one located in the Melbourne central business district and four in suburban areas. At these markets, the emphasis is on fresh produce, with prices in general being lower than those at supermarkets or other stores. There can also be a diverse range of culturally specific foods that reflect the ethnic groups that make up the local populations. Neither of the study areas actually contained one of these markets, but some participants from each area reported shopping at markets in other locations.

A few participants also mentioned occasional trips to farmers’ markets. These much smaller markets tend to be held only on weekends, usually once or twice a month, in suburban locations. Typically, only small scale, local producers may set up stalls at farmers’ markets and the available produce varies with the season. The types of foods usually on offer include regular and organic fruits and vegetables, free range or locally farmed meat and eggs, and other ‘artisan’ or ‘homemade’ products such as bread, jams, cakes, oils and condiments.

While in general, the food shopping landscapes of the two study areas were fairly similar, previous research in Melbourne has demonstrated that different areas of the city may vary in terms of the availability, accessibility and affordability of food (Turrell et al. 2009). Such differences appeared to be evident from the participant’s descriptions of their shopping activities. Due to Area A’s location in the outer suburban region of Melbourne, these participants seemed to have a more limited choice of where to shop for food compared to the participants in Area B. Being located in the ‘middle ring’ suburbs, Area B was closer to more major shopping hubs, and other suburbs that each had their own array of specialty food retail stores. Access to public transport was also poorer in Area A. All participants reported owning a car, but one participant in Area A had only limited access to the family car on weekdays, which seemed to restrict her ability to choose where and when she shopped for food.
6.2.2 Participants

As detailed in Chapter 5, 22 participants were interviewed for this study, with half recruited from each of the study areas. Tables 6.1 and 6.2 provide details about each participant, their family and their weekly food spending. All participants came from two parent households, and all partners were working in a full-time capacity at the time of interview. As expected, levels of food spending tended to be lower in the low-income area, with all but three participants spending $200 or less per week on food at home. In contrast, all but one participant in the high-income area spent $200 or more per week. Food spending however did not always strictly correlate with household income. For example, one respondent, Annabelle, reported a high household income, but had by far the lowest level of food expenditure of the participants in Area B. Similarly, Lyn reported a low household income, but reported the highest level spending on food of all participants in both Areas A and B.

Table 6.1: Area A participant details - arranged by self-reported weekly expenditure on food at home

<table>
<thead>
<tr>
<th>Participant</th>
<th>Income quintile</th>
<th>No. of children</th>
<th>Children of other ages?</th>
<th>Food spending ($/week)</th>
<th>Level of education</th>
<th>Current work status</th>
<th>Other cultural identity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deborah</td>
<td>lowest</td>
<td>4</td>
<td>✓</td>
<td>100/10</td>
<td>Apprentice/certificate</td>
<td>Part-time</td>
<td>Polynesian/Islander</td>
</tr>
<tr>
<td>Linda</td>
<td>lowest</td>
<td>5</td>
<td>✓</td>
<td>100/100</td>
<td>No further study</td>
<td>Carer/home duties</td>
<td>Polynesian/Islander</td>
</tr>
<tr>
<td>Tamara</td>
<td>3rd</td>
<td>2</td>
<td></td>
<td>110/50</td>
<td>Apprentice/certificate</td>
<td>Part-time</td>
<td></td>
</tr>
<tr>
<td>Louise</td>
<td>2nd</td>
<td>3</td>
<td>✓</td>
<td>120/25</td>
<td>Diploma</td>
<td>Part-time</td>
<td></td>
</tr>
<tr>
<td>Jacqui</td>
<td>2nd</td>
<td>4</td>
<td>✓</td>
<td>150/10</td>
<td>No further study</td>
<td>Carer/home duties</td>
<td></td>
</tr>
<tr>
<td>Sonia</td>
<td>2nd</td>
<td>2</td>
<td>✓</td>
<td>150/20</td>
<td>Bachelor or higher</td>
<td>Maternity leave</td>
<td></td>
</tr>
<tr>
<td>Janine</td>
<td>2nd</td>
<td>2</td>
<td>✓</td>
<td>150/40</td>
<td>No further study</td>
<td>Home duties</td>
<td>Partner is Indo-Fijian</td>
</tr>
<tr>
<td>Kerry</td>
<td>lowest</td>
<td>2</td>
<td>✓</td>
<td>200/10</td>
<td>Apprentice/certificate</td>
<td>Part-time</td>
<td></td>
</tr>
<tr>
<td>Natasha</td>
<td>2nd</td>
<td>2</td>
<td>✓</td>
<td>250/40</td>
<td>Diploma</td>
<td>Home duties</td>
<td>Chilean Australian</td>
</tr>
<tr>
<td>Anita</td>
<td>highest</td>
<td>1</td>
<td></td>
<td>300/60</td>
<td>No further study</td>
<td>Full time</td>
<td>Australian</td>
</tr>
<tr>
<td>Lyn</td>
<td>lowest</td>
<td>4</td>
<td>✓</td>
<td>500/67</td>
<td>Bachelor or higher</td>
<td>Home duties</td>
<td>Lebanese Australian</td>
</tr>
</tbody>
</table>
Chapter 6 - Descriptive analysis of the qualitative data

Table 6.2: Area B participant details - arranged by self-reported weekly expenditure on food at home

<table>
<thead>
<tr>
<th>Participant</th>
<th>Income quintile</th>
<th>No. of children</th>
<th>Children of other ages?</th>
<th>Food spending ($/week)</th>
<th>Level of education</th>
<th>Current work status</th>
<th>Other cultural identity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annabelle</td>
<td>4th</td>
<td>3</td>
<td>✓</td>
<td>125 25</td>
<td>Bachelor or higher</td>
<td>Home duties</td>
<td></td>
</tr>
<tr>
<td>Robyn</td>
<td>3rd</td>
<td>1</td>
<td></td>
<td>200 25</td>
<td>Apprentice/certificate</td>
<td>Home duties</td>
<td></td>
</tr>
<tr>
<td>Natalie</td>
<td>highest</td>
<td>2</td>
<td>✓</td>
<td>200 60</td>
<td>Apprentice/certificate</td>
<td>Part-time</td>
<td></td>
</tr>
<tr>
<td>Katrina</td>
<td>4th</td>
<td>2</td>
<td></td>
<td>250 50</td>
<td>Diploma</td>
<td>Full time</td>
<td>New Zealander</td>
</tr>
<tr>
<td>Emma</td>
<td>highest</td>
<td>3</td>
<td>✓</td>
<td>250 75</td>
<td>Bachelor or higher</td>
<td>Home duties</td>
<td></td>
</tr>
<tr>
<td>Bronwyn</td>
<td>highest</td>
<td>2</td>
<td></td>
<td>250 80</td>
<td>Bachelor or higher</td>
<td>Part-time</td>
<td></td>
</tr>
<tr>
<td>Alison</td>
<td>highest</td>
<td>3</td>
<td>✓</td>
<td>300 20</td>
<td>Bachelor or higher</td>
<td>Part-time</td>
<td></td>
</tr>
<tr>
<td>Ruby</td>
<td>highest</td>
<td>3</td>
<td>✓</td>
<td>350 25</td>
<td>Bachelor or higher</td>
<td>Part-time</td>
<td></td>
</tr>
<tr>
<td>Wendy</td>
<td>4th</td>
<td>4</td>
<td>✓</td>
<td>360 20</td>
<td>Bachelor or higher</td>
<td>Part-time</td>
<td></td>
</tr>
<tr>
<td>Penny</td>
<td>4th</td>
<td>2</td>
<td></td>
<td>375 100</td>
<td>Bachelor or higher</td>
<td>Full time</td>
<td></td>
</tr>
<tr>
<td>Claire</td>
<td>highest</td>
<td>2</td>
<td></td>
<td>500 42</td>
<td>Diploma</td>
<td>Home duties</td>
<td></td>
</tr>
</tbody>
</table>

Following the quotes used to illustrate the qualitative results below, participants are referred to as low-, middle- or high-income. These categories correlate to participants reporting their household income in the lowest or second quintile, the third quintile and the fourth or highest quintiles respectively.

6.3 Overview of descriptive results

The primary analysis of the interview data identified an array of emerging concepts. A process of grouping these into sub-categories and categories was undertaken to explore and make sense of the relationships between them (see Figure 6.1). Although each category is presented separately here, there is considerable overlap between them, as the complexity of ideas within each category builds and develops on it’s predecessor. The first category, perceptions of food items, contains descriptions of the different attributes of the food items that participants encountered when food shopping. The second, perceptions of food practices, consists of descriptions of
actions that participants performed with, or on, the foods that they did purchase. The final category, perceptions of food responsibilities, contains evaluative descriptions of the food-related duties that participants felt were part of their role as the primary food shoppers within their households.

The following discussion of the data is organised according to these categories, sub-categories and concepts (see Figure 6.1), and is illustrated with a selection of quotes. This descriptive analysis seeks to demonstrate the range of responses across the diverse participant group. A more formal comparative analysis, examining the effects of income and other social factors on participant perceptions of value, is provided within the discourse analysis in the Chapter 7.
6.4 Perceptions of food items

6.4.1 Attributes of food items

When explaining why they selected their preferred food items, participants’ talk generally referenced the various characteristics of food items that were available to choose from. Key attributes that weighed into decisions for participants included the price and quality of an item, as well as how healthy it was. A range of other characteristics such as quantity, packaging and versatility were also considered.

Price and quality

Interviewees described an intricate, although somewhat instinctive, process of balancing price and quality as they shopped for food. Price and quality were evaluated for foods that were purchased:

INTERVIEWER: And so tell me about the yoghurt.
CLAIRE: Oh it’s just, they just have, carry a brand there that is just beautiful, its expensive, um, but we all love it. So I have to kind of (laugh) buy that and say “That’s for special treats!” (AREA B, HIGH INCOME, 2 CHILDREN)

and foods that were not purchased:

TAMARA: You know like your chicken kievs or, but they just, they’re nice, but they are so expensive. They are like seven dollars for a box of two. Well I have to buy three boxes of that.

INTERVIEWER: To feed your whole family for one meal?
TAMARA: Yeah, and that’s like twenty-one dollars just on the chicken alone. And then I’ve got to think of something else that’s nice to go with it, so I tend to stay away from that sort of packaged chicken. (AREA A, MID-INCOME, 2 CHILDREN)

There was substantial variation in the way that participants spoke about the prices of foods, reflecting the different role that price had in their purchasing decisions. All participants spoke about their general perceptions of prices, for example, pointing out items which they avoided purchasing regularly, or at all, due to prices being ‘too high’ or ‘too expensive’. However, the subjective nature of these judgments of price meant that an item which was seen to be ‘too expensive’ by one participant may be ‘reasonably priced’ or even ‘cheap’ by another:
JACQUI: I was buying the Coles brand that was about ten dollars, I think it has disappeared, and so you need twelve to fourteen dollars now, for a lasagne.

INTERVIEWER: Alright, is that something that you would do often Jacqueline, or…?

JACQUI: No, not anymore (laugh)! Not as much.

INTERVIEWER: Because of the price?

JACQUI: The price, yeah.

INTERVIEWER: So sort of twelve to fourteen dollars for a meal… that is a bit expensive? […]

JACQUI: Yeah, I try and, around about ten dollars a meal. (AREA A, LOW INCOME, 4 CHILDREN)

WENDY: Often in the fresh food section I’ll buy filled pasta. [INT: Oh OK.] We might have that once every two weeks […] and that is fantastic from swimming lessons, when I come in at half past five and that can be ready by six [o’clock].

INTERVIEWER: So that’s a quick easy?

WENDY: It’s a quick easy meal, it’s cheap, it might be […] oh, $7 or something for the pasta, and ten dollars, you know all up, I think that is cheap, but it is nutritious and it’s nice. (AREA B, HIGH INCOME, 4 CHILDREN)

Participants with tight budgets demonstrated their need to be more attentive to cost by frequently referring to the prices of the range of food options available them and quoting exact prices when discussing their food choices:

LINDA: We go for Homebrand [fruit drink boxes], we used to go for Golden Circle, because they used to always be like two for five dollars, like with two packs of six for five dollars. And when they are on special, my husband goes for it, but now, he’s realised that the kids actually do drink the Homebrand, [INT: Mm hmm...] brand, so we just get that, because it’s just a dollar ninety-nine, it’s much cheaper for us (giggle). (AREA A, LOW INCOME, 4 CHILDREN)

Judgements about the quality of food items was also a highly subjective process. Attributes that were taken into consideration were different for fresh items compared to packaged groceries. For fresh items, important markers of quality included the physical appearance of items, or judgements about how the product might taste, often based on previous experience:
LYN: Yeah, like one day I went to the other fruit shop, and I found [them] cheaper, [by] five dollars. I got [one bag of carrots], and when I squeeze it [to make juice], it’s come, not sweet.

INTERVIEWER: Nothing there?

LYN: It was yucky taste and I just threw it in the rubbish bin, all together. I said to my husband “See, it’s only five dollars different, but I put the whole lot in the rubbish bin, you couldn’t do nothing with them.” (AREA A, LOW INCOME, 4 CHILDREN)

For fruits and vegetables, seasonality was often noted to affect availability, which in turn flowed through to both price and quality. Some participants were sensitive to these price changes:

WENDY: So if cantaloupes are in, and then the price is, let’s say two ninety-nine I’ll buy a cantaloupe. [INT: Sure.] Um, in the mango season we have mangoes every day. You know, I buy mangoes all the time… but I really only buy what’s seasonal, um, in that department. So grapes have sort of gone out now, so we had a lot of grapes over the summer. (AREA B, HIGH INCOME, 4 CHILDREN)

But others, were not:

PENNY: They often have two [punnets] for seven dollars or something like that, so I have always got to have strawberries, because that is all that Lily eats. Sorry, not all. But that is one of her favourite things, and she is not a big eater, so I always think that that is a good vitamin C thing. She has them every single day cut up in her lunch. (AREA B, HIGH INCOME, 2 CHILDREN)

For meats, the type of meat (e.g., beef or chicken), the type of cut (e.g., mince or rump steak) and the level of trust in the meat retailer (e.g., supermarket or butcher) were all important in the judgement of quality. Once again, the way that these considerations were weighed up against the price varied greatly between participants. For example, Emma was happy to pay higher prices at her local butcher in return for what she felt were high quality, premium cuts of meat (see p. 177 for quote and further description in Chapter 7). In contrast, Janine preferred to buy cheaper cuts or those that had been reduced in price at her local butcher:
JANINE: Well [at the butcher] they don’t have trays of meat. You buy per kilo.

INTERVIEWER: Oh, so they don’t have it in the pre-packaged...?

JANINE: No, they don’t have that, so you might go in and they’ll have four kilos of breast fillet for seventeen dollars [INT: OK.] or it will be six ninety-nine a kilo. So you are better off buying four kilos. [INT: OK.] Um, and I’ll buy based on that kind of thing. If they have got diced beef cheaper, then I buy that, rather than buying gravy beef. (AREA A, LOW INCOME, 2 CHILDREN)

For packaged grocery items, consistent quality and prices over time meant that an item’s branding was drawn on to make judgements about the likely quality and taste. Across all interviews, a brand hierarchy was evident, with premium, boutique or organic brands at the top, and cheap generic or ‘no name’ brands positioned at the bottom. Premium branded items, such as the “special treat” yoghurt that Claire mentioned above, were the most expensive and most desirable items. Large well known national brands were also highly regarded:

TAMARA: I like my Cadbury chocolate. And I mean, Aldi chocolate is nice... but it’s not Cadbury’s! (AREA A, MID-INCOME, 2 CHILDREN)

Smaller national brands and supermarket private labels (e.g., Woolworths ‘Select’ or Coles ‘Finest’) were in the mid to lower end of the hierarchy. At the bottom of the brand hierarchy, were items from the discount supermarket Aldi, and generic items from the major supermarkets. While having a tight food budget meant some participants’ choices were limited, having a selection of retail outlets to choose from meant that they were able to maintain a sense of agency and choice in relation to the quality of the foods they chose:

JANINE: Um, we shop at Aldi sometimes.

INTERVIEWER: Do you?

JANINE: They have, I find the... the quality of their product is a bit higher than the home-brand products in Safeway.

INTERVIEWER: Oh OK... yeah?

JANINE: So you can get the cheaper brands in Aldi and they are a bit better than the cheaper brands at Safeway. (AREA A, LOW INCOME, 2 CHILDREN)
Health value

How healthy an item was perceived to be was also frequently raised when participants explained the rationale behind their food shopping selections.

Descriptions of the health value of a food item often included nutritional concepts, such as the desirable or undesirable nutritional elements items contained, often in relation to other available options:

LYN: Ah, yeah, porridge one, yeah. I cook it, put it with milk in the morning, and um, [the children] have to have it once a week or twice a week.
INTERVIEWER: OK.
LYN: That's what I prefer. Because I feel it's a more protein and more, it's very good. That's why I prefer. They like um, Nutrigrain, the other one... I feel it's, inside a little bit of sugar and oil, but that's OK. And Cornflakes, Weetbix is good, or Rice Bubbles. (AREA A, LOW INCOME, 4 CHILDREN)

Nutritional elements were sometimes placed in the context of a general health risk or benefit:

INTERVIEWER: Mm hmm, is that why you don't buy much juice?
JANINE: Yes. It's so, there is so much sugar in it, that it's just not good for their teeth and everything. (AREA A, LOW INCOME, 2 CHILDREN)

Some participants had specific health concerns that framed the way they thought about the health value of foods:

CLAIRE: Oh gosh, um, well I always have onions, potatoes, sweet potatoes, because I am diabetic, so I buy a lot of sweet potato, they are low GI. (AREA B, HIGH INCOME, 2 CHILDREN)

Other non-nutritional ideas were also embedded within perceptions of the ‘health value’ of food items. Commonly expressed ideas were that ‘fresh’, ‘real’ or ‘natural’ foods were best and healthiest, and foods that were ‘processed’, ‘interfered with’ or ‘full of chemicals’ were less desirable:

RUBY: They can choose to have a Magnum ice-cream [for a treat], or they can choose, I try and dissuade them from, I prefer them to have something like chocolate which has got less colourings than something that has got a lot of colourings and preservatives.
INTERVIEWER: Are you concerned about colourings?
RUBY: Yeah, yeah. Absolutely.
INTERVIEWER: And what's your thinking with that?

RUBY: Well I think anything that is chemically synthesised is not going to be particularly healthy for you, and I think in small doses it's not a bad thing, but I think, I would tend to minimise it as much as I can.

(AREA B, HIGH INCOME, 3 CHILDREN)

In this context, home cooked foods were a particularly important embodiment of ‘healthy’ foods:

ANNABELLE: I look at it too, and I think, those LCMs [sweet children’s snack bars], I can make that sort of stuff myself if I want to, do you know? We have got a recipe for a Rice Bubble slice that, again, it's not that great for you, its got honey and butter, but, I can make it, so I wouldn’t buy it.

INTERVIEWER: And the making it yourself, the reasoning, the why you’d prefer to do that is that predominantly what we talked about, about the processing?

ANNABELLE: Mmm, I know what goes in it. And even if it is sugar, there is none of the other additives that um, the colours and things.

(AREA B, HIGH INCOME, 3 CHILDREN)

Interesting tensions were evident here, when as above, items that were less processed, contained fewer additives or were home-cooked were perceived as ‘healthy’ options, but were not necessarily ‘healthy’ from a nutritional perspective.

Other characteristics

Other characteristics of food items were also mentioned by participants when they described their food purchasing decisions. Attributes that were seen to make products more ‘useful’ or ‘convenient’ were perceived positively, including:

Having a long shelf life:

INTERVIEWER: What else goes in lunchboxes, for the kids?

JACQUI: Um, always a piece of fruit, a sandwich, and a snack, those biscuits, the Wheelies [individually packaged biscuits]. And I do tend to stock up on those sort of snacks, because they won’t go off during the week. (AREA A, LOW INCOME, 4 CHILDREN)

Able to be stored in the freezer:

ANNABELLE: Oh, peas and beans, I use occasionally. I throw them in stews and casseroles and things, they are just handy to have on hand rather than buying fresh all the time, they just last forever in the freezer.

(AREA B, HIGH INCOME, 3 CHILDREN)
Quick and/or easy to prepare:

PENNY: I have actually taken to buying those rice packets as well.

INTERVIEWER: Is that... can you just explain exactly what you mean about..?

PENNY: The Sunrice, packets, and you put them in the microwave and they are done in ninety seconds.

INTERVIEWER: So those are more instant?

PENNY: Yeah, it is very appealing when I am working. (AREA B, HIGH INCOME, 2 CHILDREN)

Or being versatile:

NATASHA: Um, always have tuna in the pantry. Because its um, you know you could make it in a salad or you can make it as part of a meal, you can make it as a patty, there is lots of ways you can cook it, and as an emergency and a quick way, you know usually mums are quick and in a hurry. (AREA A, LOW INCOME, 2 CHILDREN)

The way a product was packaged also had an impact on the way it was perceived. The volume of a food product contained in a particular package of food was frequently mentioned as an important consideration:

LOUISE: I wouldn’t buy that.

INTERVIEWER: The chips [crisps] you are pointing to [in the photograph]?

LOUISE: The chips. Because I find that... the multipack are more expensive for the volume. (AREA A, LOW INCOME, 3 CHILDREN)

But more general considerations of the type of packaging or marketing associated with it also weighed into food decisions:

JANINE: But they see the cartoons on the box. They want the picture on the box. Even, I bought Homebrand [generic] fruit loops. [INT: Mm hmm.] And they looked at it, and went “I’m not eating those...” [INT: Oh... ] And I said they are the same as the ones with the bird on the box, and then they tasted them and went “Oh OK... they are the same.” But they didn’t want to eat them because they looked different on the box. (AREA A, LOW INCOME, 2 CHILDREN)
Some participants took into consideration ethical issues related to food items including: how items were produced (e.g., free range animal products or organic produce); the use of particular ingredients such as palm oil or genetically modified products; and whether or not foods were made in Australia. By choosing products that were ethically superior, some participants inferred they were supporting that ‘cause’ with their food dollars, even if the benefit to themselves was only small if tangible at all:

CLAIRE: Yes, and I don’t just buy the free range ones, I buy the ones that say “These hens are free to roam”. [INT: Oh, OK.] That actually states…

INTERVIEWER: Is that because there are differences, are there?

CLAIRE: There has been a lot of media over the last few years that says that it’s, they’ll say that it is free range but that might just mean they’re, can actually move their wings a certain amount rather than actually grown free so I am quite um, specific about the ones I pick up. I give the evil eye to people to the people that are buying caged ones. I’m one of those people that stands there going “Ooo...” (pretends to look in someone else’s trolley). (AREA B, HIGH INCOME, 2 CHILDREN)

6.5 Perceptions of food practices

6.5.1 Food shopping practices

Food shopping practices were integral to the ways in which participants perceived good value around food items. Both how, when and where participants shopped, as well as the strategies they used to get ‘good deals’ were important in their constructions of the notion of good value around food.

Shopping logistics

Each interviewee had a pattern of shopping behaviours that they had developed to suit their particular set of circumstances. The ways in which participants approached food-shopping routines from a time-use perspective were evident in their discussions. Some participants, like Jacqui, simply visited just one supermarket once a week, while others, like Emma, tended to visit a vast array of shops multiple times throughout the week. For those who were able to, visiting different retailers enabled them to access a wider selection of foods:
NATALIE: So often then I’ll go from Aldi, I’ll go to Kingston Park Coles, because that’s there, and then for top ups, I’ll go to, um, Safeway, up the road. […] Plus I’ll go, um, usually I’ll go to a poultry place, separately, um, and I’ll often go to a butcher, depending on, there’s, some butchers that I like, that have certain things, and other butchers that I like that sell other things (laugh). (AREA B, HIGH INCOME, 2 CHILDREN)

But not all participants had the freedom to shop wherever or whenever they wanted. For those with tight budgets, the flow of money within the household influenced how and when they shopped:

NATASHA: Well, I have to do a shopping of at least once a week. Yeah.. um, […] A shopping for me is anything over a hundred and fifty dollars. [INT: That’s a shopping?] That’s shopping for me, yeah. Yeah, that’s like a, going for a...

INTERVIEWER: A big shop, almost?

NATASHA: Yeah, a big shop really, because I then, you know, just the little things I don’t really consider it as a shopping (half laugh).

INTERVIEWER: So that’s sort of, and so you’ll do that once a week normally?

NATASHA: I’ll do that once a week, yep.

INTERVIEWER: OK, and is that sort of a set time, or just whenever it fits like you were saying…?

NATASHA: Um, ah, usually like, it depends. I buy whenever one of us, ah… usually my husband, gets paid. So that night or whatever… [INT: You’ll go out?] If he gets paid, I’ll go out and buy… (AREA A, LOW INCOME, 2 CHILDREN)

Getting a ‘good deal’

When describing the process of selecting food items for purchase, participants talked of employing a variety of strategies to ensure they got what they felt was a ‘good deal’.

Purchasing items at reduced prices or ‘on special’ was a very common strategy. More cost conscious shoppers, like Wendy, would constantly be seeking out the specials each time they shopped. For these participants the items available on special influenced what was eaten that week, and in some cases, this in turn influenced what else would be purchased:
WENDY: Like this week we’ve had self saucing pudding. That was very big news in our house […]

INTERVIEWER: And that is a packet mix that you’ll just make up?

WENDY: Yeah, or, or occasionally I’ll buy like it was on, it was reduced for quick sale actually down to two ninety-nine for a little, an actual (makes hand movements).

INTERVIEWER: A pre-made one?

WENDY: A pre-made one. So that was very big news […] I usually make them too, out of the pack, but I um, saw this, it was in the chiller, and it was in a plastic thing that goes in the microwave.

INTERVIEWER: Oh right!

WENDY: Yeah, disgusting! […] Then because I bought that, I bought a tub of cream, so we don’t normally have cream. So I thought they can have cream on that pudding. (AREA B, HIGH INCOME, 4 CHILDREN)

Others, like Robyn were less influenced by changing prices, but would happily purchase their usual selection of groceries at a reduced price if they happened to be available:

ROBYN: Like kidney beans, chickpeas […] they are sort of like something I would possibly have in the cupboard. And sometimes if I was shopping, some of the things might be on special at a really good price, and when I buy some, I know I am going to use them. [INT: Yeah?] So I might buy, throw a couple in, just for that. So… I’m not like a, you know, always a ‘special shopper’. But if um...

INTERVIEWER: If they’re there?

ROBYN: Yeah, if it’s there, and I know it’s like, we don’t really use them all the time. (AREA B, MID INCOME, 1 CHILD)

Other strategies such as buying in bulk, visiting particular shops or trying out different products were widely used by participants to find items with a balance of product attributes that suited their needs. When talking about ‘good deals’ participants sometimes described the careful assessment they made of the attributes of interest to them, in order to ensure the apparent ‘good deal’ was indeed as good as it appeared:

TAMARA: I’ll look and I’ll go “OK how much is it for a hundred grams? Compare it to what I really want.” And that’s, I’m always, that’s why I’m always looking at bargains, because I think “Well, am I actually saving money with that or not?” And if I work it out, it’s either
At the centre of the process of finding a ‘good deal’ was a process of prioritisation. Each participant had their own way of prioritising the different attributes they perceived around each item that they contemplated purchasing. The contrasting responses below demonstrate the varied role of price, in relation to other attributes, when participants constructed their notions of ‘good value’ when food shopping. For Jacqui cost and quantity were key priorities:

JACQUI: Sure, I suppose when, it is very hard when you do look at two products that have the same product inside, and one is definitely cheaper, that [one] is better value to me.

INTERVIEWER: Mmm, mm hmm, so when it is the same..?

JACQUI: Without sitting there and reading what the actual sugar and fat content is, just looking at the price and the size of the packet.

INTERVIEWER: Yeah, yep.

JACQUI: The cheaper one is better value. (AREA A, LOW INCOME, 5 CHILDREN)

But for participants like Annabelle, with flexible budgets, a low price did not always outweigh other considerations:

ANNABELLE: Oh things like I guess mayonnaise is something that I have sort of looked at a bit in the supermarket, you sort of pick the one that you think is cheap, so that is great, um, but then you read the list of ingredients, and then you compare it to one that is more expensive, but it’s got things, just a completely different list of ingredients, it doesn’t have the water and the other things. So for me, while I am paying more I am getting value, because I am happier with what goes into the product. (AREA B, HIGH INCOME, 3 CHILDREN)

The different ways that particular groups of participants constructed their perceptions of ‘good value’ in this way are explored further in Chapter 7.
6.5.2 Food management practices

It was not only the way they shopped for food that participants noted could have a bearing on the value they obtained from the foods they bought. Carefully matching foods that to their household’s needs, and taking care to use the foods they purchased wisely also had a role in the way participants perceived value in the foods they bought.

**Negotiating family preferences**

As participants were shopping for their families, the taste preferences of both the participants themselves as well as the other members of their households had a particularly strong influence on which items would be purchased:

*INTERVIEWER:* Yeah, and which sort of rice would you pick, or…?

*RUBY:* Well I sort of suppose it depends on, its generally I don’t do brown, because my kids don’t like brown rice. So there is one called Sungold, which is not brown, it’s not white, it’s kind of a middle ground. *(AREA B, HIGH INCOME, 3 CHILDREN)*

One way to ensure foods met family preferences was to involve the children in some of the purchasing decisions. Children’s input was usually tempered by boundaries set by the parent, as Katrina explained when discussing breakfast cereals:

*KATRINA:* Usually I’ll let them choose out of a few which ones they can have, and they’ll choose it themselves…

*INTERVIEWER:* What are their options?

*KATRINA:* Oh, there’s like they have, can choose from Nutrigrain and Milo, and, um, some of the Nesquick ones. *[INT: Mm hmm.] Um, probably most of them I’d let, they are fussy as well, for what ones they like and don’t like. *[INT: OK.] But most of them I’d let them have, there’s, except for there’s one that I wouldn’t let them have at all, and that’s the fruity loops one. *(AREA A, HIGH INCOME, 2 CHILDREN)*

Participants also discussed the pressure they felt to ‘keep it interesting’—that is, to present a variety of foods that were enjoyed by their families. Efforts were made to provide a diverse repertoire of meals and snacks by either buying a variety of foods and/or preparing them in a variety of ways:
TAMARA: And just to make it a little bit more interesting what I’ve been doing the last few weeks is that I have been putting chicken stock into the boiling water;

INTERVIEWER: Oh OK, with the rice?

TAMARA: To the rice, so it comes out yellow.

INTERVIEWER: Righto then.

TAMARA: And the kids are like “What’s this?!” and I go “It’s just a chicken flavour rice, that’s all, instead of being white, it’s just got that yellow tinge in it.” They love it. It’s just something different. (AREA A, MID-INCOME, 2 CHILDREN)

At times, participants struggled to keep regular family meals and snacks interesting. A few participants even went so far as to describe a different sense of value around mundane foods, pointing out, as Janine does below, that by managing expectations, the ‘need’ for more interesting, and possibly more expensive foods could be reduced:

JANINE: My mum made pickles, so I have been eating pickles for about two weeks. They are really good, so I’ll have cheese and pickle sandwich, or a roll.

INTERVIEWER: Yep, that sort of thing.

JANINE: It’s pretty boring... I try to keep it boring.

INTERVIEWER: Why is that? That’s an interesting comment.

JANINE: Because if you eat, I think if you eat something really fancy then the next day you want the same kind of fancy thing. [If you] just eat the same boring stuff every day, you don’t have high expectations (half-laugh). (AREA A, LOW INCOME, 2 CHILDREN)

Providing foods that were perceived as treats was another important strategy participants used to meet family preferences and keep everyone happy. Treat foods, in contrast to everyday foods, were items that were bought in recognition of a special occasion, or sometimes just a pleasant change from the standard routine. Foods selected for treats were particularly enjoyed by the ‘eater’. As demonstrated by the following three quotes, the delineation between everyday foods and those that were treats were made according the perceived cost of an item, its health value or both:
DEBORAH: Um, bananas, I got bananas, apples, ah strawberries for ninety-nine cents a punnet. And that’s a treat for my daughter, she loves strawberries. (Area A, Low Income, 4 Children)

JANINE: Once the kids go to bed, then the chips come out (quiet half laugh) and then you sneak the packet open so the kids can’t hear you […] corn chips, and dip, um, salt and vinegar chips… [INT: Yeah?] Yeah...

INTERVIEWER: And so that is more for you, not for the kids?

JANINE: The kids might get it as a treat, but yeah, we try, try to not let them eat too much of it, but we eat too much of it. […] Its naughty, yeah. (Area A, Low Income, 2 Children)

WENDY: Rohan [husband] likes white chocolate, but I don’t like that that much, so I buy a dark chocolate for myself. And, that’s like a treat. So we have run out of that now, and I won’t buy it again until I see it on special. Because I think we don’t need it, but then if it’s on special I think “Oh that’s good.” (Area B, High Income, 4 Children)

Managing the flow of food

Another set of strategies that participants talked about were those used to manage the flow of food through the household. Participants talked about the tactics they employed to control when foods would be eaten, and who got to eat them.

A household’s capacity to store foods, together with their food budget, influenced how participants’ practices around ‘stocking up’ on non-perishable foods. Some participants described constantly keeping their cupboards stocked with non-perishable goods. For these people, new foods entering the household often replaced those that had been recently been used:

ALISON: So, like I know there is a container of Milo [in the cupboard] under the stairs, but there is also one we are using in the [pantry]. And so when we finish that one, I can grab the one from under the stairs, and I’ll buy a new one. (Area B, High Income, 3 Children)
These participants had the resources to purchase and keep a selection of foods that could be utilised occasionally when life was busy, or no specific meal had been organised:

*WENDY:* And I use those [tortilla wraps] for burritos as well, you know if I make a Mexican...

*INTERVIEWER:* For a meal or something?

*WENDY:* Yeah, for a meal, for a dinner or something. So they’re quite good in the cupboard. Because I have got those and there is usually mince in the freezer.

*INTERVIEWER:* OK.

*WENDY:* So I can throw that together, and there is always lettuce and carrot and cheese and you know in the fridge, um, so I quite like those burrito things, because they have got dual purpose, so that is very good. (AREA B, HIGH INCOME, 4 CHILDREN)

In contrast, some participants did not have room in their budget for extra non-perishable food items. These participants did talk about using foods from the cupboard for unplanned meals or snacks, but, as Linda describes here, these foods were used when there was little other food in the house at all:

*LINDA:* But yeah, corned beef, if we have nothing to cook for dinner we have corned beef in the cupboard, it’s corned beef and spaghetti, you know Heinz spaghetti?

*INTERVIEWER:* Oh, spaghetti on toast?

*LINDA:* So yeah, you just throw that, the spaghetti and the corned beef in a frying pan, divide that up and just serve it to the kids.

*INTERVIEWER:* So that’s like a backup?

*LINDA:* Yeah, that’s like if we have nothing else to eat, because [the] kids will eat that, they love that. (AREA A, LOW INCOME, 5 CHILDREN)

Participants on tight budgets also described ways that they managed the limited quantities of food that they could afford. Making a small amount of food ‘stretch’ was important in some households in order that all family members were fed:

*JACQUI:* Or because the family is getting bigger with eating and the roast chicken isn’t going as far, we tend to buy the roast chicken and then we break it up and make a chicken wrap with it, so put lettuce in it, and... […]

*INTERVIEWER:* Because you were saying that if you just serve it as normal roast chicken...
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JACQUI: It won’t go around the whole family.

INTERVIEWER: OK, because there are six of you eating isn’t there?
And one chicken?

JACQUI: Yeah. Yeah, and when they were little, it was easy just to give
them a little bit, but now they’re, I mean the oldest one, fourteen, could
eat a whole chicken on his own (laugh)! (AREA A, LOW INCOME, 4
CHILDREN)

Preparing foods

For the majority of participants, cooking was an essential, but not particularly
enjoyable task. At times it was alluded to as a being rather repetitive and thankless,
despite their effort to meet children’s and partners’ tastes:

ALISON: Oh because, you know, the kids will go “Yuk! Don’t like that”
Oh! Who could be bothered cooking when you are going to get “Yuk!”?
(AREA B, HIGH INCOME, 3 CHILDREN)

Participants were generally confident in preparing meals for their families, even if
for some this meant purchasing only a limited range of foods:

INTERVIEWER: We have really just talked about chicken and beef. Do
you get anything else like lamb, or pork?

NATASHA: Not really, I would like to, but I don’t cook, my husband isn’t
a lamb person, unless it’s a barbecued lamb. But n… I’m not… [INT:
Not really?] Not because I don’t want to, I just don’t know how to cook
a nice lamb, that’s all, I don’t know.

INTERVIEWER: Yeah, so you are pretty confident with your beef and
your chicken?

NATASHA: I’m confident more with my beef and my chicken, yeah.
(AREA A, LOW INCOME, 2 CHILDREN)

A small group of women genuinely enjoyed preparing meals for their family. Most,
but not all of these women were those who had more time and/or money to devote to
cooking. Annabelle fitted into this group. Her keen interest in cooking was evident as
she explained why she avoided buying frozen or pre-prepared meals:

ANNABELLE: It doesn’t appeal to me for some reason, I figure I can
make it myself, so I don’t need to buy it already done for me. I’d rather
make it myself, so yeah, I have nothing against it, I don’t think I have
ever tried it, I just prefer to make it myself.

INTERVIEWER: Yeah, right, you sound like you are quite a whizz in the
kitchen.
ANNABELLE: I like cooking, I love cooking.

INTERVIEWER: OK, something, is that just an enjoyment out of it?

ANNABELLE: Mm, yeah. Just a passion, it’s not a chore, not most nights it’s not a chore anyway. (AREA B, HIGH INCOME, 3 CHILDREN)

Time was an important factor that interviewees believed had an impact on their food cooking behaviours, and therefore their food choices. All participants described needing to prepare meals that were relatively quick and easy at times:

KATRINA: Quite often, usually once, at least once a week I try and cook something in the crockpot, so cook a casserole or a stew or something. [...] I like putting it on before I… so when you get home I don’t have to worry about doing dinner when I get home. (AREA B, HIGH INCOME, 2 CHILDREN)

As this quote demonstrates particular cooking practices, in this case using a slow cooker, could significantly reduce the time needed to cook and prepare family foods. The range of preparation and cooking practices participants engaged in therefore had an impact on the types of foods they would purchase. Keen cooks, like Annabelle, tended to purchase many basic items as ‘ingredients’ which, with time and skill, they would combine with others transform into family foods. For Katrina, using a slow cooker meant cheaper cuts of meat which required long cooking times became good options. Many participants however, preferred to minimise the time and effort involved in food preparation, either just sometimes, or most of the time. For meals, one way to achieve this was by purchasing semi-prepared foods:

LOUISE: I also like to buy something frozen for Sunday night’s tea, because I don’t like to cook on Sunday nights. So I just put frozen chips, or... and either, um, chicken nuggets, fish fingers, party pies or sausage rolls. So depending on what we had last time, I’ll choose one of the others and sort of mix it up. [INT: Mm hmm.] So um, yeah, come Sunday night, just put those in the oven... and there’s tea (laugh)! (AREA A, LOW INCOME, 3 CHILDREN)
6.6 Perceptions of food responsibilities

6.6.1 Responsibilities to meet family food needs

A sense of responsibility to meet the particular needs of their families by choosing the ‘right’ foods was evident as participants described their everyday food practices. The specific needs of participants’ families tended to fit into the broad categories of basic needs and health needs.

Meeting basic food wants and needs

As participants talked about their food practices, they did not lose sight of the role of food as a basic necessity for all members of the family. While the importance of meeting the basic needs of the family were often taken for granted, participants did at times discuss their responsibilities around ensuring everyone was happy and satisfied with the amount, and types of foods that were brought into the home.

Satisfying appetite

Satisfying the appetites of all members of the family was seen as a fundamental task of a family food provider. Often, the quantities of food required to meet the needs of particular family members were noted, especially of ‘growing’ children:

RUBY: I have a son who eats twenty-one Vitabrits [wheat breakfast biscuits] a day.

INTERVIEWER: Twenty-one a day! So this is the fourteen [year old]...?

RUBY: Twenty-one Vitabrits a day, he eats seven in the morning. He’s fourteen, he’s tall, he’s getting bigger and bigger and he’s a rower, and he just eats and eats and eats. So he has seven Vitabrits in the morning, he would have quite often seven when he gets home from school. Because it’s healthy. It’s a great thing to fill up with the fibre and everything, he has his milk on it, and then quite often at night, before he goes to bed, he’ll have seven. (AREA B, HIGH INCOME, 3 CHILDREN)

The types of food chosen were also sometimes explained in terms of how well they ‘filled up’ hungry family members, or otherwise satisfied their appetites:

INTERVIEWER: And why do you like those Natasha?

NATASHA: The Up and Gos [breakfast milk drink] like um… it’s go the benefits of like the Weetbix, you know thing, and it’s full. That’s important for me to get, you know, it kind of fills them up, a little bit
Ensuring food is enjoyed

As discussed earlier, participants frequently mentioned choosing foods that fit in with the preferences of their partners and children. Treats in particular, were universally discussed as an important element of the family’s food supply. Selecting foods that were enjoyed by family members not only made mealtimes more harmonious, but participants indirectly pointed to the basic right we all have to enjoy the food we eat. Participants implied that in their roles as food providers they took on the responsibility to make sure that need was met. This sense of responsibility is highlighted in Kerry’s description of how she deliberately chose potato chips (crisps) for her three-year-old son, as he ‘deserved’ to enjoy junk food:

KERRY: So after I get Luke’s [partner] bars, I go down and I get Daniel [son] some chips... because we decided he really doesn’t eat a lot of junk food.

INTERVIEWER: OK.

KERRY: And he deserves a treat every now and then, he’s only home Tuesdays and Fridays, so Luke eats the rest (laugh)! (Area A, Low Income, 2 Children)

Sharing food is an important social activity. Participants also often spoke of the ways that the foods they chose were incorporated into family life. It seemed that part of the job of being responsible for the foods purchased, overlapped with ensuring other areas of family life went smoothly too. For example, Penny here describes how by choosing some lollies that ‘everyone’ likes to eat, she is able to facilitate ‘happy times’ spent together as a family:

PENNY: I do keep lollies, I buy a lot of those um The Natural Food Company I think it is, the, um, ah what are they called. Dinosaurs or…

INTERVIEWER: The jelly lollies? […]

PENNY: Yeah, and see if we went out to the park or something I might take a packet of those and the kids share them or if we go to the beach or something like that we will take a packet because they are just easy, or if we are travelling a long way in the car or something.

INTERVIEWER: And that particular brand, is, have you got... is that your preference?

PENNY: Yeah, everyone likes them. (Area B, High Income, 2 Children)
Fitting in

Several participants mentioned being aware of the social impacts their food choices had for their family, particularly in relation to foods that were taken to school. The potential for stigma around certain foods in the schoolyard was clear when Louise explained to me why she spent the time to make an extra shopping trip to Aldi, rather than just buying generic brand foods at Coles:

LOUISE: I went to Coles and bought all the Homebrands, um, yeah, it would financially be about the same. But, the Aldi’s brands don’t look like Homebrands. [INT: OK…] So when the kids open up their lunchboxes at school, instead of saying, seeing, you know all the other kids looking in their lunchbox and seeing all these no name, plain wrapped things… they see stuff like um, that juice box [her daughter is with her and drinking a juice box] that looks like every other juice box.

INTERVIEWER: Right… in terms of it’s bright and colourful? [LOUISE: Yeah, yeah…] As opposed to the black and white? […]

LOUISE: Yeah, yep… so because I think, um, my oldest son, he was getting ribbed at school a little bit. He could… you know, about having all these no name brands in his lunchbox. [INT: OK, OK…] So I was sort of aware that there is peer group pressure about that. (AREA A, LOW INCOME, 2 CHILDREN)

Lower-income participants like Louise felt a responsibility to ensure their children were seen to have the ‘right’ brand of snacks, or simply to have a well-stocked lunchbox. Higher-income participants also talked of similar responsibilities, but for them the pressure was to provide lunchboxes filled with an ever-changing, interesting selection of healthy foods that were not only enticing enough to be eaten by their offspring, but also ‘kept up’ with the kinds of snacks they felt that other children took to school. Bronwyn described in detail how her children’s school had recently consulted with a community dietitian and changed the timing of scheduled food breaks in order to minimise bad behaviour, and promote concentration during lessons. Bronwyn’s children were “very aware of what should and shouldn’t be in their lunchbox”. Packaged foods were to be avoided, so their lunchboxes instead contained items such as carrot and celery sticks with tzatziki dip, cheese and biscuits, sultanas, rice crackers and a variety of fruit in a myriad of reusable plastic containers. After her long description, Bronwyn reflected on the complexity of the seemingly simple task of packing the lunchbox:
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BRONWYN: But I sort of remember the days, I went to school, you had a lunchbox, you know the plastic yellow thing, and your sandwich was wrapped up in rainbow wax paper, and then you might get, you know a sugar biscuit or, something like that. And a piece of fruit, and that was... [INT: Yeah...] That was it. [INT: Yep.] Whereas...

INTERVIEWER: There are lots of different components now?

BRONWYN: Now there's the art of lunchbox (laugh)! (AREA B, HIGH INCOME, 2 CHILDREN)

Providing a 'healthy balance'

There was a shared understanding between all participants about the basic concept of what a ‘healthy diet’ was- everyone spoke of trying to encourage healthy foods such as fruits and vegetables, and limit unhealthy foods. However, there was also a clear understanding that it was impossible to restrict all unhealthy foods all the time, as Ruby noted when describing Trolley D as a fairly ‘good’ trolley despite including some less healthy items:

RUBY: They have obviously got children because they have got Yogos [chocolate yoghurt/dairy snack]. And kids, they have to have treats, I think. I think completely banning them from food like, whether it’s a flavoured kind of yoghurt [like Yogo], I think that is just silly, because I think it makes them go nuts when they actually see it. (AREA B, HIGH INCOME, 3 CHILDREN)

All mothers, in their own way, expressed the responsibility they felt to encourage a healthy balance of ‘good’ and ‘bad’ foods. However, participants varied in their perceptions of where boundaries should be drawn around the ‘right’ levels of intake of ‘good’ and ‘bad’ foods. This variation was particularly evident in terms of what constituted a ‘limited intake’ of unhealthy foods. For some mothers like Penny for example, some particularly unhealthy foods were only allowed to be consumed a few times per year:

PENNY: But generally, the kids will have cereal every morning. Oh, and sometimes in the holidays they are allowed to have Coco Pops.

INTERVIEWER: OK, just every now and again?

PENNY: Yeah, that’s because you know they are the chocolate ones, even though they tell you they are high in fibre and everything, so we have those as a ‘sometimes’... (AREA B, HIGH INCOME, 2 CHILDREN)
Whereas for other mothers, limits were in place, but some unhealthy foods were allowed every day:

*TAMARA: Because I do have the snacks, I do have the junk food, but I’ve got to keep an eye on how much they eat. Because otherwise they would just sit there and eat it all...*

*INTERVIEWER: And can you tell me a bit about like, with your thinking for your kids, like you say you need to limit them, what sorts of boundaries are your limits?*

*TAMARA: Well, normally it will be, they’ll come home from school and they’ll like “Oh I want a chocolate.” And I’ll go “OK, one chocolate.” And they are like “But I’m still hungry.” And I’ll go “OK, one packet of chips [crisps].”* (AREA A, MIDDLE INCOME, 2 CHILDREN)

### Protecting current and future health

As discussed above, the health value that participants perceived in foods was an important part of how they constructed a sense of good value. When explaining why healthy foods were important, participants expressed a sense of responsibility for the current and future health status of themselves and their family members. This sense of responsibility seemed to come about because of both the link between food and health, and the participants’ roles in making food choices on behalf of their families.

### Short-term ideas

Some participants talked positively about their role in promoting the short-term health and wellbeing of their families through the foods that they chose:

*TAMARA: So for me it’s more value for money to get the twenty bag of Freddos [small chocolate bars]. Now I use them for just snacks to have at home, but mostly for snacks to have a bit of chocolate, which is energy, at school.* (AREA A, MIDDLE INCOME, 2 CHILDREN)

Some participants were also wary of the short-term health risks that were associated with the foods they purchased. As Ruby discusses below, the level of risk associated with some foods could vary depending on who was going to eat them, which made her even more responsible for ensuring the ‘right’ foods were consumed by the ‘right’ people:
Chapter 6 - Descriptive analysis of the qualitative data

RUBY: My son I’m not particularly, I suppose I’m not as worried about him because he is so active and fit and strong with rowing, he just burns everything that he puts into his mouth. And I know, look I know he, I know as a fourteen year old boy, if he’s out with his mates, they’ll go and buy a packet of chips [crisps], or whatever. I know that he does that, I suppose because I am less physically concerned about him, it doesn’t bother me. […] Whereas my middle daughter, she is just one of these typical, looks at something, and rather than going up, she’s going out. So I am far more conscious of her food choices. And she is conscious of it too. (AREA B, HIGH INCOME, 3 CHILDREN)

Responsibilities for short-term health implications were also particularly important in households where one or more family members had particular ongoing health issues, or were susceptible to developing problems if food intake was not carefully monitored. For example, Anita describes how she needed to be particularly careful around the types of bread she chose:

ANITA: Normally wholemeal, yes, because Hayley [daughter] also has a bowel condition where she can’t go to the toilet on a regular basis, so the wholemeal keeps her regular. White seems to effect her eczema and her asthma, and also binds her up, so yeah, we all eat wholemeal. (AREA A, HIGH INCOME, 1 CHILD)

Long-term ideas

Some, but not all participants were also focussed on the long-term health implications of the foods that they fed their families. Children were often positioned as ‘at risk’ of growing up to develop health problems if they were not provided with healthy foods in their formative years. Lyn was particularly articulate about her role in looking after the future health of her children by choosing the foods she provided very carefully:

LYN: Because when they grow up, as long as they have the good food, when they young, they will be healthy, doesn’t matter what they eat in later, in their life… yeah. [INT: Yeah?] That can affect in the future, if you not look after your children when they are young, in the future they will have a lot of problem maybe… [INT: Yeah.] Cholesterol.. high blood pressure, sugar, teeth… your tooth losing lot of… I’ve seen a lot of people with, I don’t want to go for, my sister in law, she’s not very good cooker. And when her children cry, she give them the lollipop, her son is only two years old and his teeth [have fillings] up to the top. (AREA A, LOW INCOME, 4 CHILDREN)
This notion of giving children a ‘healthy start’ in life was not only constructed as a mother’s responsibility through the foods that they provided for the family in the immediate sense, but also in the ways that they should ‘train’ their children to choose healthy foods for themselves as they grew up and became independent. This responsibility to teach children to be ‘good eaters’ was evident when some participants spoke about passing on their taste for healthy, desirable foods:

**CLAIRE:** I love corn, radishes...

**INTERVIEWER:** So a really big variety?

**CLAIRE:** Yeah... but that is what I was brought up with, a lot of variety, your plate at night had to have every colour of the rainbow... fresh beetroot, I adore it’s my favourite vegetable. [INT: Mm hmm.] Um, carrots, the boys love, peas... peas in fact I buy frozen, usually, fresh beans, zucchini, heaps of zucchini, yeah, we eat a lot of... and my boys are very good. (AREA B, HIGH INCOME, 2 CHILDREN)

And their dislike of less healthy, undesirable foods:

**WENDY:** Yeah we have tomato sauce, we have ketchup […] They are only allowed to have it really with sausages and pies. And, I don’t, I don’t let them have it with that much, because I just think it’s disgusting [INT: Oh do you?] Oh the way, the way, you know when kids put it on everything? And they cover all their food in it and put it on their potatoes and stuff. [INT: Oh OK.] No...

**INTERVIEWER:** So they are a bit limited... in that one?

**WENDY:** Yes, yes I limit it, but they like it. (AREA B, HIGH INCOME, 4 CHILDREN)

Some participants also spoke more explicitly of the responsibility they felt to ‘teach’ their children food skills, constructing this as an essential part of their role in bringing up children who were able to adequately ‘look after’ themselves in the future:

**BRONWYN:** They’ll cook pancakes, and Tom [son] will flip them and do all that kind of stuff himself. [INT: Yeah.] I married Mike, and he could not cook. He can not cook. He’s a smart man... [INT: (half-laugh)] But he cannot cook. And my kids will not grow up... [INT: Like that?] Leaving home not being able, to find their way. Oh no, I think it’s, I think it’s you know...

**INTERVIEWER:** Really important?

**BRONWYN:** Yeah. And I think they are good at it. (AREA B, HIGH INCOME, 2 CHILDREN)
6.6.2 Balancing food and other family needs

Participants also expressed a sense of responsibility about finding the ‘right’ balance of time and money to spend on food. Time invested in food shopping and preparation activities often needed to be balanced against the monetary costs involved. The time and money spent on food also had to be carefully considered in terms of other household demands on these limited resources.

Managing time and money spent on food

As the primary food shoppers within their households, participants often expressed a strong sense of responsibility about the way they spent money on food. As this series of excerpts demonstrates, all participants tried to avoid ‘wasting’ money on foods, but just as perceptions about what constituted good value varied, so too did perceptions of ‘waste’ or ‘poor value’:

Natasha saw purchasing items at unreasonably high prices as a bad decision:

*NATASHA: Normally in the fruit and veggies I buy bananas, um, when they are cheaper. [INT: Yeah…] Because I don’t, whenever the price has gone up considerably I don’t buy a product. [INT: No…OK.] I refuse to buy it […] because if I go and I spend that, that much money, on the broccoli, when its gone up, you know, it’s just…umm… the rest of my shopping is suffering, you know what I mean? Because I’m spending more money. And nuh, just not willing to go that way. (AREA A, LOW INCOME, 2 CHILDREN)*

Tamara talked of buying brand name items that were not necessarily better quality as a ‘waste’ of money:

*TAMARA: This is an expensive trolley […] Because everything is labelled. It’s all labelled, there is no no-name stuff in there. Do you know what I mean? Other than your spinach leaves, what’s that… cherry tomatoes, but everything else, is like look at the milk, it’s Pura it’s Big M it’s… these people I can see, this would be like my brother’s trolley. Because he likes his brand names… you know what I mean? INTERVIEWER: And so what’s different about his family when he shops? TAMARA: He will not shop at Aldi. [INT: Right.] He just won’t shop at Aldi because he likes his brand names, simple as that. He doesn’t care that he is spending fifty to a hundred dollars more, he likes his brand names. (AREA A, MIDDLE INCOME, 2 CHILDREN)*
And finally Alison described the decisions to buy packaged snacks, particularly in the context of low income, as displaying poor judgement:

ALISON: Struggling families, kids come to school, you know, sometimes dirty, whatever, but, a big variety [of food]? Oh no I can’t afford to do that. [INT: Mmm.] And in their lunchbox they have... um... Roll-ups [processed fruit snacks], so pre-packaged stuff, Roll ups, a packet of chips [crisps]... um... often nothing healthy, no fruit, no sandwich, because I think it’s easy to get, and they are also expensive things. [INT: Yeah, yeah..] So one, they are expensive, one, they are not good for the environment, and [...] three, they are not good for the kids. [...] And so lunchtime comes they all open their lunchbox and you go... “Wow! You shouldn’t be spending money on that food!” Because they’re really struggling… (AREA B, HIGH INCOME, 3 CHILDREN)

However, it was not only money that needed to be carefully allocated when shopping for food, time was also a vital resource. As described earlier, the ways in which participants shopped varied greatly, but each participant, at some level, seemed to weigh up the pros and cons of spending more time shopping in order to get better value. Here Louise described her thinking about the way she balanced of time and money when purchasing meat:

LOUISE: I won’t buy the meat at Aldi’s because I think it is just too dear. Um... and the, wholesale butcher’s meat is a lot cheaper than Coles, so I’m probably am saving a bit of money to go there, but you have to buy in bulk. [INT: Mm hmm.] And Green Hill [several suburbs away] is a bit of a drive. It’s not somewhere that is on my way anywhere. [INT: Mm hmm... ] And um, and then when you come home you have to like, divide all the mince from two kilos into five hundred grams, and... divide the bulk pack of sausages up into... before you put it into the freezer... so... its... just messy, it’s yuk and it’s time consuming again, and um...

INTERVIEWER: And so at the moment it’s not quite worth it for you?
LOUISE: No, no... so... I just um, yeah, just get it at Coles. (AREA A, LOW INCOME, 3 CHILDREN)
Managing time and money spent on other family priorities/activities

Food activities were heavily intertwined with other family activities. The time and money spent of food therefore had to be carefully balanced with that available for other family priorities.

The responsibility that participants felt to carefully manage their time spent buying and preparing food was clearly evident when Wendy described her ‘poor’ management of the family dinner the night before her interview:

WENDY: I just love fish. I love it. But it’s very expensive. And, it’s a bit tricky to cook actually. It’s a bit tricky to get um… meat is so easy, you know and meat is so, just, it is very forgiving. You know you can just casserole it, and heat it up the next night, second… you know if you make a big casserole. [INT: Sure...] Fish, fish you have got to get it and cook it […] you’ve got to be fairly organised you’ve got to cook it quickly. You’ve got to cook it, everyone has got to be home, ready to eat, you know I can’t sort of have it bubbling away on the stove, and, um… Like last night, they were late home from training. From soccer training, three of them, Rohan [husband] and the two big boys, and I was cross, because the fish was really, had dried out and so […] I was cross with Rohan, they were home late and I was cooking fish, and see I shouldn’t have cooked fish on a training night. (AREA B, HIGH INCOME, 4 CHILDREN)

The money spent on food was also intertwined with that spent on other household needs. However, it was only participants with tight budgets who tended to speak about how money was allocated between food and other household demands, highlighting that in the context of low financial resources, the multiple demands on household expenditure needed to be prioritised. For one participant at least, food was seen as more flexible than other parts of the household budget:

DEBORAH: There are some things that you can’t cut back on, or save money on like your power and gas and your mortgage. But there are some things that you can. And that’s what we look to do all the time.

INTERVIEWER: With food that is?

DEBORAH: With food, yep. (AREA A, LOW INCOME, 4 CHILDREN)

However, it was not always the case that participants cut back on food spending in order to support other areas of the household budget. Lyn for example, spent a very large portion of her household’s low income on food. She explained that she felt it was important to provide a traditional Lebanese diet for her family, but lamented that essential items, such as lamb and fish, were particularly expensive foods. In order to
acquire these foods with only limited resources, she explained that she found ways to save money on other basic expenses so that she could spend more of their money on a wide range of fresh and culturally appropriate foods:

INTERVIEWER: You spend a lot of money on food, how does that fit with the rest of your budget?

LYN: Ah (laugh) ah... yeah, it’s taken like most of my budget, the food, and the ... life needs more than like, if I want to go shopping, (laugh) sometimes I go op-shop for myself instead to go.. ah.. to normal shop. Or I follow the specials too, like the end of season [clothes sales], to get what I need... so that’s what, how I am doing, because I am not going to afford everything. (Area A, low income, 4 children)

6.7 Summary of findings

This chapter has demonstrated that participants constructed complex notions around the value of food items through their descriptions of the attributes of food items themselves, the practices that they undertook to access, select, prepare and manage the foods they bought, and the responsibility they felt to choose the ‘right’ foods for their families. On each of these three levels, different participants from this diverse sample perceived the value of foods in very different ways.

In the following chapter, a discourse analysis builds on this descriptive analysis, examining in more detail the social patterns around perceptions of value that have begun to emerge here. The discourse analysis investigates how participants constructed themselves as ‘good shoppers’, ‘good mothers’ and ‘good citizens’ through their selections of ‘good value’ foods. In particular it compares and contrasts how this was done by participants from a range of socio-economic backgrounds.
Chapter 7

Discourse analysis of the qualitative data

7.1 Chapter overview

This chapter presents the results of the secondary, theoretical analysis of the interview data. This discourse analysis was undertaken in order to fulfil the second qualitative objective and therefore explored how participants’ level of household income influenced the way that they perceived value in foods. Again, there was a particular focus on the ways in which considerations around the monetary cost of items and their nutritional value contributed to participants’ perceptions of value around food.

The inductive nature of this qualitative phase of research meant that the theoretical approach informing this secondary analysis was not established until the primary, descriptive analysis was complete. In order to clarify the approach taken, this chapter is split into two distinct parts. The first part explains the theoretical background for the discourse analysis and provides a broad overview of the findings. The second part then presents an in-depth description of the results, beginning with those from ‘high-resource’ and ‘low-resource’ participants followed by the findings from two specific ‘mixed-resource’ participants.

7.2 Background

7.2.1 Theoretical approach

**Governmentality**

Governmentality is a term developed by Michel Foucault that refers to a way of conceptualising the nature of government, and as such, provides a way to analyse how power operates within modern society (Petersen 2003). In the Foucauldian sense, governing has been famously described as the “conduct of conduct” (Gordon 1991, p. 2). At its heart, governmentality is concerned with the way individuals’ experiences are controlled, and the way in which individuals work to control themselves (Coveney 1998). As such, governing is not solely the task of ‘the government’ or state in political terms, rather, it occurs at multiple levels within
society: at the level of the state, by and within institutions, agencies or groups, as well as at the individual level.

In his essay ‘Governmentality’, Foucault illustrated both the purposes and instruments of modern government by tracing their historical emergence and contrasting the means and ends of modern government with those of societies existing prior to the eighteenth century (Foucault 1991). Prior to the eighteenth century, the primary aim of government was the protection of the sovereign’s power over his territory, with a secondary concern for promoting ‘the common good’ for the inhabitants of the territory, which in practice meant a “state of affairs where all the subjects without exception obey the laws” (Foucault 1991, p. 94). At this time, the rule of law was therefore both the instrument of governing and the ends that it sought to achieve.

A key historical shift in thinking that gave rise to modern forms of government was the development of an understanding of the population as an entity that was separate to the state, but had a life of its own over and above that of the individuals who made it up. Understanding the population in this way, and seeing it as a complex of “men and things” (Foucault 1991, p. 93) was made possible through the collection of statistics (literally “the science of the state” p. 96) which revealed events and rhythms of the population- births, marriages, deaths and epidemics. Foucault’s historical analysis of the way statistics were used to understand effects of the epidemics of the eighteenth century demonstrated how this emerging conceptualisation of the population changed both the means and ends of government:

“From this moment on, those who inhabited a territory were no longer understood merely as juridical subjects who must obey the laws issued by a sovereign authority nor as isolated individuals whose conduct was to be shaped and disciplined, but as existing within a dense field of relations between people and people, people and things, people and events. Government had to act upon these relations that were subject to natural processes and external pressures, and these had to be understood and administered using a whole range of strategies and tactics to secure the well-being of each and of all.” (Rose et al. 2006, p. 87)

Here we can see the marked shift in purpose of government being from the ‘common good’, to a series of ends that are “convenient” to all (Foucault 1991, p. 95), that is, outcomes that are simultaneously desirable for the individuals within the population and for the population as a whole. In explaining how the ‘tactics’ or instruments of
modern government work to reach these ends, Foucault draws together his earlier concepts of technologies of power/domination and technologies of self (Foucault 1993; Petersen 2003).

Technologies of power are concerned with how individuals are able to influence the conduct of one another (Foucault 1993). Rather than being seen as an oppressive force, in this context power is instead understood as positive, productive force which fosters itself in human relationships (Petersen 2003). Foucault argues that power exists in all human relationships, whether they be amorous, economic, institutional or social (Foucault 1997). As such, power is not something which is possessed, but rather is exercised, and individuals are not just the subjects of power, but play an active role in its operation (Rose & Miller 1992) - a role, which, like power itself, is mobile and modifiable rather than fixed once and for all (Foucault 1997). Technologies of power, as an instrument of government, therefore operate through processes such as surveillance and normalisation, where individuals become the object of another person or groups’ control in order to move them towards specific ends or objectives (Coveney 1998).

Of greater interest for the current study are technologies of self, as they are concerned with the individual’s relation to themselves: the ways in which individuals come to understand themselves, and act upon themselves in order to ‘improve’ themselves in light of certain knowledges or truths (Rose et al. 2006). Through his later work around the ‘ethics of self’, Foucault (1997) explained how an individual constitutes himself as a subject in an active fashion, by drawing on the range discourses he or she encounters in his or her world. Foucault describes how discourses in this regard are “patterns which [the subject] finds in his culture and which are proposed, suggested and imposed on him by his culture, his society and his social group” (Foucault 1997, p. 291). Therefore, in modern forms of government, individuals are constructed as actively choosing subjects, who by conducting themselves in a way that fulfils their own wants and desires, also act in a way that suits the state (Rose et al. 2006).

Modern neo-liberal forms of government characteristically establish networks of power via loose affiliations of agencies and agents that enables the government of the population to occur ‘at a distance’ (Miller & Rose 1990). Via technologies of the self, these networks of power lead and control individuals to act in certain ways, while shifting responsibility away from the state and on to individuals and groups (Lemke 2001). Expert discourses, such as those around food and nutrition, are a prime
example of how this occurs. Through a governmentality lens, experts can be seen to enter into a ‘double alliance’ (Rose & Miller 1992). On one hand aiding the governing parties of the day by translating their ‘problems’ into technical language, applying scientific approaches and offering tools and solutions to these problems at the population level, while, at the same time, addressing individuals within the population more directly, offering them advice, strategies and solutions to the problems they can see in themselves thus ‘helping’ them to ‘help themselves’.

The notion of governmentality therefore provides a way of understanding how, via these technologies of government, power becomes dispersed through society in capillary like networks, infiltrating even the most ‘private’ of spaces such as the family.

**Government, health and the family**

With the shift towards modern forms of government Foucault describes a corresponding elevation of the importance of the family- as both a critical internal element of the population and a fundamental instrument through which the conduct of the population can be influenced (Foucault 1991). During the eighteenth century, as states began to gather more and more statistics about a vast array of population phenomena such as demography, sexual behaviour and consumption patterns, families became a key source of information. The family also became particularly important as an agent in the promotion of the health of the population, as steps were taken to rectify the ‘problems’ that were revealed by this information.

It was during this period, that families also came to be understood as a “dense, saturated, permanent, continuous physical environment which envelopes, maintains and develops the child’s body” (Foucault 1980, p. 172). Thus, families were positioned as responsible for the ‘correct management’ of children. Previous governmentality studies have demonstrated for instance, how mothers have been positioned as responsible for the health status of their children’s teeth by expert discourses around dental health education, but importantly, that mothers themselves also often actively assume the position of responsible parent in this regard (Nettleton 1991). So, modern forms of government therefore construct the responsibility for a pregnancy to be converted into a healthy live birth, and the resultant child to grow up to become a healthy and productive member of society, as the responsibility of the family, not that of the state.
7.2.2 Overview of results

While there is no prescribed way of doing a Foucauldian discourse analysis, governmentality studies all focus on the conduct of conduct—“how we conduct ourselves, how we attempt to conduct others, and how others attempt to control our conduct” (Petersen 2003, p. 188).

With participant interviews forming the ‘corpus of statements’ (Arribas-Ayllon & Walkerdine 2008) which were examined for this discourse analysis, my primary focus was on how individuals constructed themselves when talking about their food purchases. If we view the behaviour of individuals as being regulated through their active engagement with recommended or imposed practices, which serve to normalise behaviour as individuals strive to improve themselves (Petersen 2003), we can begin unpack the various discourses that individuals draw on in order to construct themselves as good citizens. Thus, the results of the discourse analysis are presented in terms of the three key subject positions that were evident in the interview data, and two overarching discourses that participants drew on in order to construct themselves in these ways (see Figure 7.1).

![Diagram](image)

Figure 7.1: Overview of the results of the discourse analysis—three subject positions and two overarching discourses
The three subject positions

Three subject positions emerged from this analysis, that of the ‘good shopper’, the ‘good mother’ and the ‘good citizen’. The results sections of this chapter are each structured according to these three subject positions. A more detailed description of each subject position is given at the start of each relevant section, but in order to understand the rest of the overview of the results, a brief overview of each subject position is provided here.

The ‘good shopper’:

The ‘good shopper’ subject position captures the ideas that participants expressed to demonstrate how they did a ‘good job’ when food shopping. Participants constructed themselves as ‘good shoppers’ by justifying how their food shopping decisions were ‘right’ and ‘proper’ from their point of view, and in particular how they constructed the selection of items they purchased as being ‘good value’.

The ‘good mother’:

The ‘good mother’ subject position encompasses the ways in which participants perceived their role as the mother within their family unit. Participants constructed themselves as ‘good mothers’ by demonstrating how their food practices of choosing, buying and preparing foods for their families were an expression of love for their partners and children. Through their discussions of these practices, mothers constructed themselves as caring, nurturing and therefore ‘good’ mothers.

The ‘good citizen’:

The ‘good citizen’ subject position encapsulates the ways in which participants expressed how their actions as a mother impacted on their position, and that of their family as a whole, within their broader social environment. Mothers constructed themselves as ‘good citizens’ by discussing their food choice decisions and other food practices in terms of their implications for both the family’s status as an autonomous and self-caring unit, and their implications for their children’s futures as healthy and productive citizens.
Chapter 7 - Discourse analysis of the qualitative data

The two discourses of interest

Participants constructed themselves as ‘good shoppers’, ‘good mothers’ and ‘good citizens’ by drawing on a range of discourses as they discussed their food shopping practices. During the data analysis process, two key discourses were identified that were both highly relevant to the research questions, and were drawn on in different ways across the participant groups. Given the comparative nature of the research questions and the dominance of the discourses of quality (de Solier 2013) and thrift (Miller 2001), it was these two discourses that were selected as the focus of the current analysis. Residing within each of these broad discourses were multiple more tightly focussed discourses. For example, there were discourses of health, sensory taste and enjoyment within the quality discourse, and discourses of cost, time and waste within the thrift discourse.

As the objectives informing this study were focussed on how individuals’ perceptions of the nutritional value and monetary costs of foods contributed to their constructions of value when food shopping, two of the more tightly focussed discourses were of particular interest in this analysis: the discourse of nutrition, which formed part of the discourse of quality; and the discourse of cost which formed part of the discourse of thrift.

Discourses are a representation of one particular version of reality, which means that discourses are always relevant to the specific context of time and place in which they were produced. The familiarity of current discourses can at times make them seem permanent or ‘natural’, when in fact, they are constantly changing (Mills 2004). In order to reveal the arbitrariness of specific discourses, Foucault emphasised the importance of tracing their history, as the origins of particular discourses and discursive practices are always linked to certain key shifts in history (Mills 2004). Therefore, the history of these two specific discourses of interest will be briefly outlined before moving into a broader discussion of the results.

The nutrition discourse

Nutritional science did not begin as a field of study in its own right, rather in the nineteenth century food was analysed within the broader field of chemistry (Santich 1995). From this reductionist scientific standpoint, early food scientists went about quantifying the properties of foods. Scrinis (2013) identified three broad areas that together formed the base of what grew into the field of nutritional science: quantifying the macro-nutrients, or major building blocks, of different foods such as
proteins, carbohydrates and fats; measuring the energy content of foods using the calorie, and consequently calculating the basic energy needs of human bodies; and the discovery of vitamins and minerals, in particular how their absence in the diet could lead to specific diseases and health conditions.

An important influence on the development of nutritional discourses is the way in which the emerging scientific discoveries of food and nutrition have been applied in the social sphere over time (Coveney 2000; Crotty 1995; Santich 1995). The science of nutrition did, and continues to, inform understandings of the dietary needs of particular groups within society. As such, it forms the basis of expert dietary advice which is disseminated in an effort to improve the general health status of the population. The most famous early example of this is the way in which Wilbur Atwater used his work quantifying the energy content of foods, together with surveys of household food usage in American households, to develop estimates of the minimum requirements of nutrients for individuals, which he then translated into nutritious and ‘economical’ menus for families (Coveney 2000). These social effects of the science of nutrition have continued since Atwater’s time, with the fundamental link between food and health, meaning that specific nutritional components, and by association certain foods, have been characterised as ‘protective’/good or ‘to be avoided’/bad (Santich 1995). As French sociologist Claude Fischler notes, foods are thus subjected to binary judgements like heroes and villains in a detective story, but their roles change over time in line with medical theories and popular beliefs. He describes for example, how fibre is a current ‘hero’ and how in the 1970’s sugar was ‘evil’, but by the 1990’s was overshadowed by fat, which took over as the “ultimate villain, with a Jekyll-and-Hyde personality: unsaturated, admirable; and saturated, heavy and deadly” (Fischler 1993, p. 62).

In the current Australian context, nutritional science still dominates government sanctioned advice for healthy eating, with consumption of foods from the five ‘nutritious’ groups encouraged and caution urged around foods that are high in saturated fats, sugars and salt (NHMRC 2013a). The nutritional discourse, like all others is not static. It continues to move and shift. The current ‘nutricentric’ approach to food and eating, while generally accepted by the government, media and general public, is certainly not without criticism (see for example, (Crotty 1995; Scrinis 2013)). Indeed, current understandings of what is ‘good’ to eat are slowly shifting to include not only what is best for the health of individuals, but also to include considerations of sustainability, such as the methods by which they are produced, the
level of processing and packaging; that is, how the foods we eat can also be understood to promote socio-environmental health (Hamelin et al. 2010).

The cost discourse

The discourse around women procuring food in ways that are economically efficiently resides within a broader discourse of thrift. Thrift is defined as the “sparing use or careful expenditure of means: frugality” (Shorter Oxford English Dictionary 2007, p. 3249). In the context of shopping, the notion the consumer trait of frugality, can be “characterized by the degree to which consumers are both restrained in acquiring and in resourcefully using economic goods and services to achieve longer-term goals” (Lastovicka et al. 1999, p. 88). The discourse of monetary cost, as it appeared in this study, therefore revolved around the idea that one must be constantly vigilant in the way one spends money on foods, and strive to practice self-restraint when making purchases, but also use foods that are purchased in a wise or prudent manner. In doing so, the participants could be seen to be working towards a ‘longer term goal’ of upholding and strengthening their families’ financial position, thus fulfilling their civic duty to be financially independent and therefore avoiding the negative connotations associated with ‘dependency’ (Fraser & Gordon 1994).

Technological changes in mass production, preservation and distribution of foods that came about as a result of the industrial revolution meant that throughout the nineteenth and early twentieth centuries, the household task of provisioning food shifted in focus from growing and preserving foods to purchasing it as required. For example, by the 1920’s in America, refrigerated railway transport meant that fruits and vegetables were available in markets at reasonable prices all year round, and a wide array were available in canned form, meaning that many middle class women bought a vastly greater proportion of their families food than their mother’s would have (Cowan 1976). With this move to acquiring food from sources outside the home, came a concomitant increase in the role women played in the financial running of the household. Christine Frederick, an influential early figure in the home economics movement, likened this new role that women assumed to that of a purchasing agent in a large firm, thus positioning the housewife’s role as a “truly managerial position in the modern household that stood at the intersection of previously separate spheres” (Strasser 1982, p. 247). With this emerging role came a strong moral imperative for women to be thrifty, as seen from the emphasis placed on spending household funds ‘wisely’ and ‘making the most’ of resources in home
economics publications, both old and new. The moral responsibilities that women carried were captured at times rather forcefully in Mrs Beeton’s Guide to Household Management - a text first published in Britain in 1861, but one that had a powerful influence on Australian housewives in the late nineteenth and early to mid-twentieth centuries. The following extract from the ‘new’ edition of this renowned text, published a century after the original, plainly illustrates the moral importance of being a ‘thrifty’ housewife:

“Even more fundamental than the control of staff, is the housewife’s responsibility for domestic expenditure. Money worries probably account- unnecessarily- for more petty domestic arguments and unhappiness than any other single cause, and the housewife who does not make every effort to balance the domestic budget properly is, to put it bluntly, neglecting her most vital task” (Mrs Beeton’s cookery and household management 1961, p. 68).

Currently, in Australian society, this discourse of thrift around food is alive and well, albeit updated to reflect the issues that face modern society. Australia was not as severely affected by the global financial crisis (GFC) as other western nations (ABS & Reserve Bank of Australia 2013), but there has nonetheless been a general feeling of ‘belt tightening’ that has permeated Australian society in its wake. The salience of this discourse to the general public around the time of this study is evident in the public statements of Woolworths CEO Michael Luscombe who explained that consumers’ frugal attitudes and their “quest to extract the best possible value” (Woolworths maintains sales and earnings guidance 2009) was central to his firms future business strategies. The pervasive references to low prices in the marketing campaigns of both Woolworths and Coles supermarkets, together with the rise of the low-cost ‘no-frills’ supermarket Aldi (Supermarket shootout: Will the independents survive? 2011), are testament to the power of the idea of frugality in the modern Australian food purchasing environment. Since entering the Australian market in 2001, Aldi has rapidly increased its store numbers, and by 2012 was believed to have secured about a 7% share of all grocery sales in the capital cities where the majority of its stores are located (Greenblat 2012).
Social patterns in participant constructions of themselves as food choosing subjects

Following the identification of the three subject positions and two overarching discourses, participants’ accounts of their food shopping practices were revisited, with a focus on identifying how exactly individual participants drew on the discourses of quality and thrift as they talked themselves into existence as ‘good shoppers’, ‘good mothers’ and ‘good citizens’.

Patterns in the ways participants constructed themselves by drawing on the discourses of nutrition and cost emerged. Two small, but distinct groups of participants were identified, who displayed more extreme ways of constructing the self around food shopping activities. Initially, these groups were labelled as the ‘quality-focussed’ group, which consisted of five participants who drew heavily on the discourse of quality, but only lightly on the discourse of thrift, and the ‘cost-focussed’ group which consisted of four participants who did the opposite. The remaining 13 participants existed somewhere in between these two groups, drawing on the discourses of both quality and thrift, with or without one being more dominant.

During the data analysis process, I began to understand these patterns in the ways that participants constructed themselves as food choosing subjects as reflecting a ‘spectrum’ of perceptions around ‘good value’ foods. The following diagram was developed to assist in the explanation of the ways in which all participants drew on the two discourses of interest, and to demonstrate how perceptions of the 11 participants discussed later in this chapter (represented in pink below) related to those of the rest of the participant group (represented in green).
As illustrated above, my analysis revealed that all participants drew substantially on the discourses of quality and thrift, but that the balance between the two discourses varied across the participant group. The ‘remainder of the sample’ (13 participants), who fell between the quality- and cost-focussed groups, each drew on both discourses to construct themselves as food choosing subjects. Some participants (such as Anita and Deborah) drew on both discourses fairly equally, whilst others gave more emphasis to one or the other discourse- but not to the same extent as those in the cost- or quality-focussed groups.

As the divergent views of the quality- and cost-focussed groups were somewhat extreme, the data from the participants in these groups was particularly useful in understanding the range of discursive options that were available to participants when constructing themselves as food choosing subjects. The comparative nature of the research questions driving this study, therefore led me to ask what might account for the different ways in which these groups of quality- and cost-focussed participants drew on these discourses.

At first glance, there were distinct social differences between the participants who made up these quality-focussed and cost-focussed groups. The second objective for this study set the task of examining the role of income in shaping participant perceptions of value when food shopping, and these two groups did indeed have different levels of household income, with all ‘quality-focussed’ participants having high levels of income, and three out of the four ‘cost-focussed’ participants having
low household income. However, when considering these two groups of participants in context of the whole sample, it was clear that they were not the only participants with particularly high or low levels of income. Thus, income was only part of the explanation, it could not account for the full picture.

In order to better understand the social differences between these two groups of participants, and how these may account for the different ways they drew on the available discourses, I turned to Bourdieu’s conceptualisation of habitus. In this theoretical approach, income is positioned as just one type of ‘capital’ or ‘resource’, which together with other resources and life experiences, shape an individual’s way of seeing the world.

**Resources rather than income**

Sociologist Pierre Bourdieu (1984) conducted extensive studies of lifestyle and consumption choices of Parisians in the 1960s. Here, I draw on his theory of taste (Holt 1998), and in particular his conceptualisations of ‘habitus’ and ‘capital’. This theory presents an alternative to structurally deterministic models of consumption that typically depict rational economic actor who makes choices based on some kind of cost-benefit analysis (Swartz 1997), and therefore fits well with the governmentality approach taken in this study.

Bourdieu proposes that type and amount of ‘capital’, or resources, an individual has determines their place in the social hierarchy. For Bourdieu (1986), capital presents itself in three fundamental guises:

- **Economic capital** - income and monetary wealth;
- **Cultural capital** - which for our purposes is most relevant in its embodied state, that is, a set of socially rare and distinctive tastes, skills, and knowledge and practices (Holt 1998), but may also exist in an objectified state (pictures, books or instruments) or an institutionalised state (educational qualifications); and finally
- **Social capital** - relationships or social connections.

Bourdieu also often refers to ‘symbolic capital’, which rather than being a fourth type of capital in its own right, can be understood as the form that the three types of capital “assume when they are perceived and recognized as legitimate” (Bourdieu 1989, p17). This means that for Bourdieu, any of the three fundamental types of
capital may undergo a process of conversion and consequently be recognised as legitimate “currency” or an asset (Southerton 2011).

Bourdieu argues that social life can be thought of as a multidimensional status game in which people draw on their different types of capital they possess to compete for status (Holt 1998). It is the volume and the composition of forms of capital a person has at their disposal that play a key role in the position a person assumes within a social hierarchy.

This social position (which he terms class), is in turn associated with a particular ‘habitus’- an embodied way of thinking, feeling and acting (Holt 1998).

“The habitus bounds a set of attitudes, beliefs and behaviours which belong to a particular group of people; it is a series of systems which, developed over time and generations, is the ‘milieu’ in which individuals live with a collective (un)consciousness.” (Wills et al. 2011, p. 727)

It is this habitus that gives shape to an individual’s lifestyle and consumption decisions, one of which is their decisions about food purchases. Habitus determines how a person thinks about the universe of objects to which they are exposed, it constructs desire towards object that are highly valued, and disgust toward those that are not (Holt 1998).

In summary, it is not only a person’s income, but the broader array of financial, cultural and social resources which individuals have at their disposal that foster a particular way of seeing the world. For this study, this concept of habitus provides a lens through which we can understand the complex social patterns that were evident in the results of the discourse analysis. Bourdieu’s understanding of habitus gives us a way to conceptualise how individuals approach the myriad of food items that await them on each and every food-shopping trip. Thereby, this theory provides a way of understanding how and why different participants may have ‘tuned in’ differently to the particular discourses that circulate in the field of food shopping.
Three groups of participants

While I did collect some information from participants about their cultural activities, I did not specifically set out to collect data about participants’ levels of cultural capital or social capital. I therefore re-examined the participants personal details and the interview transcripts, looking for evidence of the different types of capital they had at their disposal.

As the utility of Bourdieu’s theory of capital/habitus as an explanatory framework emerged during the data analysis phase, judgements about the different forms of capital/resources available to participants had to be made with the limited data available. Estimates of participants’ levels of financial capital were made using information collected about participants’ self-reported household income quintile, the status of their housing payments and their household’s level of financial stress. Estimates of participants’ levels of cultural capital were made using information about their, and their partners’, reported occupations and levels of education together with any references they made to people within their social networks. Following previous studies of food and class (Bennett et al. 2009; Savage et al. 2013), participants’ reported preferences for foods eaten out or as take-away were also used to estimate participants’ levels of cultural capital.

Table 7.1 below summarises the estimated levels of capital/resources for each participant. Participants are listed in the approximate order that they may be placed from left to right on the spectrum of perceptions of ‘good’ value foods (see Fig. 7.2 above). An expanded table outlining further details of the data used to make these judgements appears in Appendix K. The limitations of the data used to make these judgements is further discussed in the next chapter (see page 242).
When reconsidering the participants in this way, it became clear that women in the quality-focussed group (indicated in grey at the top of Table 7.1) had high levels of all types of capital (economic, social and cultural), and those in the cost-focussed group (indicated in grey at the bottom of Table 7.1) had low levels of all forms of capital. As such, the way that these groups approached their food shopping and other food practices had much in common with previously described types of habitus. The ‘quality-focussed’ group had a ‘middle class habitus’ as they tended to focus on the form or aesthetic attributes of food, rather than on their functional attributes, whereas the ‘cost-focussed’ group had a ‘working class habitus’ or a ‘taste for necessity’ as they valued the functional aspects of food and paid less attention to considerations of form (Bourdieu 1984).

From here, these groups with therefore be referred to as the ‘high-resource’ participants and ‘low-resource’ participants, signalling my move away from an understanding of income as an isolated determinant of women’s perceptions of value in their food shopping.

The bulk of the results section that follows compares and contrasts the ways in which these high-resource and low-resource groups drew on discourse to construct...
themselves as ‘good shoppers’, ‘good mothers’ and ‘good citizens’. As these two groups represent either end of the emergent spectrum of perceptions of value around foods. Exploring their responses in depth provides a practical way to illustrate the breadth of perceptions that existed across the whole participant group.

It is also important however, to look in-between these two contrasting participant groups in order to get a more comprehensive understanding of how habitus influenced the way that participants drew on particular discourses. Most of the remaining thirteen participants (positioned in the middle in Table 7.1) constructed themselves in ways that were fairly similar to those of participants in either the high-resource or low-resource groups, but in general were less ‘extreme’, that is, they employed the discourses of quality and cost more equally. There were however four participants (Anita, Deborah, Sonia and Lyn), whose perceptions of value and ways of constructing themselves, stood out from the other participants. Their ways of constructing themselves as they shopped for food were substantially different to other participants with similar levels of income. Bourdieu argued that influence of habitus in the field of consumption can most clearly be seen when the same income is associated with very different patterns of consumption (Swartz 1997). Indeed, on further examination, one of these four participants had a high level of income and the other three, low levels. But, overall all four could be seen to have ‘mixed’ levels of resources. They drew on the discourses around food shopping in quite different ways to either the high- or low-resource groups. The results section therefore concludes with a description of how two of these four ‘mixed-resource’ participants drew on the available discourses in order to construct themselves as ‘good shoppers’, ‘good mothers’ and ‘good citizens’. 
7.3 Results from the high-resource and low-resource participants

7.3.1 Description of the participant groups

**High-resource participants**

Claire, Bronwyn, Ruby, Emma and Annabelle were the five participants whose approach to food shopping and other food practices most strongly prioritised the discourse of quality over the discourse of thrift. Each of these women reported high levels of household income, with Annabelle in the second highest quintile, and all other participants falling within the highest-income quintile.

When eating out, these participants tended to bring take-away foods back home to eat, or eat out at a ‘family friendly’ restaurants with local Italian/Pizza, Thai, Japanese and Vietnamese restaurants being popular choices. Several families mentioned eating fish and chips occasionally, and some noted that they might serve it with salad. Large 'fast food' chains such as McDonalds were actively avoided in normal circumstances, but were frequented if the family was travelling long distances by car. Some participants noted that at times older children might go somewhere like McDonalds with others, such as a sporting group or members of their extended family. If eating out as a couple without the children, high-resource participants chose the same kind of restaurants as mentioned above, and two participants mentioned that very occasionally they would enjoy going out to a 'very nice’, often ‘trendy’, fine-dining restaurant in the city.

Participants in this group all spoke about sharing food with friends, either ‘entertaining’ at their house or visiting others at their homes. Often more expensive and better quality foods were purchased for sharing with outsiders, such as premium cuts of meat for a main meal, expensive cheeses for a cheese platter or perhaps snack foods such as potato or corn chips (crisps) that were usually avoided. Several participants also spoke about discussing ideas about different food shopping options, or ways of accessing foods with some of their friends. For example, Bronwyn mentioned how she had tried using a home-delivered fruit and vegetable ‘box scheme’ at the encouragement of her friends, and Ruby described how her family ‘owned’ some chickens which ‘lived’ at their friends house, and the two families shared the eggs that were produced.
Low-resource participants

Linda, Jacqui, Louise and Tamara were the four participants whose approach to food shopping and other food practices strongly prioritised the discourse of thrift, with limited reference to the discourse of quality. Of these participants, Linda reported a household income that aligned with the lowest-income quintile, and Jacqui and Louise had household incomes in the second lowest quintile. Tamara’s income fell within the middle-income quintile, but she commented that it was due to recent pay rise her husband had received, and in the previous year, she too would have been in the second income quintile.

When eating out, these participants reported their families tended to select ‘fast food’ take away foods like burgers from McDonalds or Hungry Jacks, BBQ or fried chicken and chips, pizza or fish and chips. All participants discussed the cost of the various options available when explaining their choices. Jacqui and Louise, who were particularly concerned with the cost of eating out, mentioned that they often selected fish and chips. Despite their general perceptions of this as an expensive choice, each of them found that it became an economical one if you selected a ‘family pack’. Both described these as containing other items like fried dim-sims, potato cakes, chips along with four portions of fish- of which two pieces were allocated to the adults, and the children shared the rest. Tamara and Louise reported having take away at least once a week, while Linda’s family had it twice or more. Linda and Louise both mentioned eating out on special occasions, usually selecting a ‘family’ style restaurant, perhaps such a franchised Italian, Mexican or ‘all you can eat’ restaurant or perhaps a bistro at a local hotel.

Louise and Tamara talked of sharing meals with friends, however they did not talk in the same way as the high-resource participants about buying special or more expensive foods to share with others. Instead they shared their standard, or more special regular meals, such as a Sunday roast. Linda spoke of sharing some foods with friends, but it tended to be limited more to snacks, like sharing a cake that she would bake for a girlfriend. Each of these three participants spoke of sharing other ideas about food with friends and/or family. For example, Louise said she discussed shopping at Aldi as a cost-saving strategy with some of her fellow students at TAFE, and Linda explained that she had since taught her girlfriend how to make the cake that they enjoyed eating together. Jacqui stood out amongst this group, as she did not talk of sharing food, or ideas about food beyond her immediate family, although, as in all interviews, there were no direct questions asked about this.
7.3.2 High- and low-resource participants as ‘good shoppers’

This first subject position highlights how participants perceived value in the range of foods they considered for purchase in their usual shopping routines. The discourses of both quality and thrift were strongly intertwined with participants’ descriptions of both the logistics of their shopping practices, and with their decisions about the types of items they did, and did not purchase.

Each of these groups drew on the two overarching discourses in distinctly different ways, with the high-resource group prioritising the discourse of quality, with particular attention given to the discourse of nutrition, and the low-resource group prioritising the discourse of thrift, with an emphasis on the discourse of cost. Despite the strong emphasis on one of the two main discourses, the other was not entirely absent in either group.

Below, I describe how one dominant discourse was evident in each group’s accounts of their shopping habits and choices, and then examine how moral attention was also paid to the other discourse. Thus, I build a picture of how these two groups draw on the discourse in very different ways to construct themselves as ‘good shoppers’, with all participants illustrating how the decisions they made were ‘right’ and ‘proper’, and how the food items they purchased were those which to them, represented ‘good value’.

How did high-resource participants construct themselves as ‘good shoppers’?

**Quality comes first when food shopping**

The frequency of shopping trips, retailers utilised and types of products selected by high-resource participants all pointed to the salience of quality in their constructions of themselves as ‘good shoppers’. In general, these participants shopped little and often, visiting food shops multiple times per week, and usually doing at least one ‘big shop’ at a supermarket or fruit and vegetable market. Four out of the five high-resource participants planned meals only a few days in advance, and frequent shopping trips allowed them to buy items as they were needed, as well as regularly restock fresh items. A steady supply of non-perishable foods and items that could be frozen (such as meat) was usually maintained in these households.
While these participants all used supermarkets, they also regularly visited smaller independent shops such as butchers, bakers or fruit and vegetable retailers. Prices in these independent shops were noted to be higher than those at the supermarkets, but so too was the perceived quality of foods on offer:

EMMA: If we were just doing say a stir-fry, I might just grab some, meat at a supermarket. [INT: Yep.] But if we were doing like, I wouldn’t really buy eye fillet or butterfly lamb at a supermarket, I’d buy that at a butcher. [INT: Ok.] Yeah...

INTERVIEWER: And what’s your thinking there?
EMMA: Oh, I just think... it’s going to be better.
INTERVIEWER: Uhuh... yep. So that’s quality?
EMMA: Yeah.. and probably fresher. Like, you know how they’re all, a lot of those things um, in the supermarket are... vacuum sealed? [INT: Oh OK.] So I think how long have they been around? And I know ageing meat is not the worst thing... but I just, I would always go up there and [the butcher] can always go “Put this on for this long,” or “Serve this with this” Or... I think it’s that experience [of shopping at the butchers].

Emma was discerning in her needs for quality when purchasing meat. Here, she distinguished between a ‘stir-fry’ meal, where as just one component, standard quality meat from the supermarket would do. However, for meals where meat was the central focus, such as an “eye fillet” of beef, or a “butterfly” leg of lamb, it was important to choose a higher quality product. As she explained later that these tend to be cooked on special occasions or served to guests. Emma draws on the morality of quality here by highlighting the superior level freshness and packaging of the meat at the butcher compared to the supermarket. She also implicitly refers to the knowledge and experience of the butchers, on whom she depends to not only supply her with a ‘better’ product, but also to give her advice on how to ‘properly’ transform it into a delicious meal.

A variety of attributes indicated that food items were ‘good quality’ (see p. 128). For the high-resource participants the composition of foods was a particularly important consideration in assessing quality. These participants constructed food composition as a multifaceted issue by drawing on a range of related discourses. For example, participants talked of considering not only the ingredients that were contained in a product, but also its nutritional profile and how processed or chemically enhanced it was. Ethical concerns were also noted at times, with issues
such as free-range production of meat and eggs, the amount of packaging a product contained or required in its use, or being made and produced in Australia all seen as contributing to the overall quality of a food product.

Nutritional value was central to the way these high-resource participants perceived value in food. They regularly drew on the technical language of nutritional science discourses (Coveney 2007; Wills et al. 2011), appropriately employing concepts such as calories, glycemic index and cholesterol as they discussed which food items they preferred to buy. Foods with qualities that were recommended for consumption by expert nutritional discourses were positioned as the ‘right’ and ‘proper’ foods to seek out and purchase for the family:

ANNABELLE: We have flavoured yoghurt and greek yoghurt [...] I read the ingredients on the um, on the containers, just to suss out...

INTERVIEWER: What are you looking for there?

ANNABELLE: Sugar amounts mainly [INT: Really? Mm hmm.] I, I don’t want to be too particular, but I don’t want to be feeding the girls, or any of us, large amounts of... when obviously you can avoid it.

INTERVIEWER: Yep, yep, so is that more the fruity ones that would have sugar in them?

ANNABELLE: Exactly, yes.

Annabelle’s discussion here highlights how she judges foods according to a nutritional discourse before making her selection. Here, she recounts her self-disciplinary strategies of reading the information on the packaging of several items to “suss out” which of the various yogurt products available are ‘good’ and ‘bad’. She draws on the nutritional concept of high levels of sugar being an undesirable feature in yoghurt, pointing out that “obviously” not all choices are equal in this respect. When shopping for her family, Annabelle prefers to choose yoghurts which are lower in sugar and therefore ‘better’ quality products according to this nutritional discourse.

High-resource women also drew on nutritional discourses around getting a ‘healthy balance’ as they described their food shopping practices. Each participant in this group pointed, implicitly or explicitly, to how they monitored the flow of food in the house- keeping a mental note of what types of foods they were buying, how these were being consumed and by whom. They then made sure they purchased enough of the ‘right’ foods and not too many of the ‘wrong’ foods in order to achieve the ‘right’ (i.e., healthy) balance of foods for their family.
We see this talk around a healthy balance in the nutritional sense when the high-resource participants regularly couched the items they bought in terms of ‘everyday foods’ or ‘occasional foods’:

*RUBY:* Apples are a real staple. I need a staple fruit in my house, and my husband eats about six apples a day [INT: Right!] Seriously. So I have a son who eats two or three, I’ve got a daughter who eats two or three, so I’ve loads and different varieties of apples. in the house [INT: Mm hmm.] And I’ve always got, I always tend to sort of have bananas, and pears and then whatever else is in season.

and:

*ANNABELLE:* I don’t want chips [for their lunchboxes] or… [INT: Mm hmm.] because I know my girls would love them, but I don’t want them to get hooked on those sort of snacky foods. […] They’re delicious but they are full of stuff that they don’t really need to eat all the time. So I am happy for them to have them as treats and at parties and that’s absolutely fine, I just don’t want it to be part of their staple diet.

These concepts reflect recommendations for food intake in current Australian nutritional guidelines (NHMRC 2013b) and are strongly reminiscent of public health messages employed in recent state-wide health promotion campaigns aimed at families (de Silva-Sanigorski et al. 2010) and those implemented through food services in both schools (Department of Education and Early Childhood Development 2012) and recreational clubs (Coppel & Buchanan 2010). Foods that were designated by mothers as ‘everyday foods’ were freely available for consumption in these households. Items such as water and milk for drinks, fruit and vegetables for snacks and salads or vegetables for meals commonly fit into this everyday category. These items were framed as ‘good value’ products and were regularly purchased. As Ruby described, they were ‘staple’ items in the family diet. In contrast, highly processed, nutritionally poor items were deemed to be ‘occasional’ or ‘sometimes’ foods, and thus framed as not offering ‘good value’. As such, these were purchased or consumed only infrequently and this usually occurred in specially designated situations. Common examples were Coco Pops or other sweet breakfast cereals purchased only to celebrate a child’s birthday or during school holidays, and chips (crisps), lollies and soft drinks purchased for, or eaten at, parties or other social events.
Chapter 7 - Discourse analysis of the qualitative data

**Saving money was an optional extra**

The morality of thrift was not entirely absent from the discussion of value by the high-resource participants, but they treated it much like an ‘optional extra’.

When discussing their food purchases, these participants (re)created a sense of moral duty around saving money, by pointing out ways that they looked to ‘save’ money when food shopping, and positioning it as the ‘right’ and ‘proper’ thing to do. However, as Emma points out while saving money in was desirable overall, it did not take precedence over quality:

> EMMA: I think if, you know, um, luckily um, we’ve got a huge mortgage now, but we can really buy what we like. [INT: Yep.] But, I don’t, I try to be as, I don’t know what’s the word, not conservative, but, you know I don’t go and give us blue eye [fish] and [beef] eye fillet every night [INT: Yep.] Well not in that sort of...

> INTERVIEWER: It’s not sort of lashing out on crazy things?

> EMMA: No. Like if, if I can buy something in bulk or save money, I will try to. Um, but not at the expense of maybe nutrition or healthy sort of stuff.

For these participants, the discourse of quality often fed into a discourse of thrift. By buying better quality items, they positioned themselves as getting good value by virtue of ‘saving’, or at least not ‘wasting’ money. Here, Bronwyn draws on the discourse of thrift to position lower cost items as wasteful:

> BRONWYN: We have got a superb fruit shop […] so the majority of stuff I probably [get there]. Fruit, fresh fruit and veggies, and anytime I buy it from Safeway, or from Coles I always go “These apples are foul, and nobody eats them.” [INT: Mm hmm.] And it might be a bit cheaper, but you throw so much of it out, because it’s you know shocking...

In other ways, the disciplinary strategies that these highly resourced participants employed around the discourse of thrift, reflects what Goode (2012) describes as ‘opt-in frugality’. She uses this term to describe the discourse currently circulating British popular media where ideas for being thrifty and saving money come across more as a “wholesome lifestyle choice, an adventure even, than a response to difficult times” (Goode 2012, p. 8).

The clearest example of ‘opting-in’ to the morality of thrift in the current study was in the descriptions that these participants gave of using the low-cost supermarket Aldi. Three of these highly resources participants included Aldi as a semi-regular stop in their shopping routines, purchasing particular items there that met their high
standards for quality. Claire’s description of the growing social acceptability of Aldi amongst her friends highlights the way that she was able to frame buying low cost items there as moral from the perspective of thrift, without risking her fundamental adherence to the morality of quality:

CLAIRE: It’s like a sort of secret society, because it’s Aldi, you know, it might be considered a bit, cheap and nasty to go there. But once you start talking to people, someone might say (whisper) “Oh, have you tried Aldi’s chocolate?” And you’d say (normal voice) “Yes, I’ve been on to it for ages, how good is it?” And then you start talking and people say, “Yeah, I have tried that”, “Oh yeah and have you had their...” And all of a sudden they don’t realise, that they actually buy lots of stuff there, but psychologically they are pretending that they don’t- that they do the shopping elsewhere, and they just get a few bits and pieces.

INTERVIEWER: And why would it be that they are pretending do you think? Just to explain it to me...

CLAIRE: Oh, just because I think it’s, I think that the marketing is no frills, you know it’s all cheap, perhaps that they think that you think that they are cheap and not, and if you come to their house, that they are serving you cheap food... I don’t know, I think it is just that image, that it’s not premium brand.

INTERVIEWER: That’s really interesting...

CLAIRE: I think that’s what it is. It’s sort of an embarrassment about it or an “Oh! Did you know?” and “Oh really!” And like, well why is it such a surprise? I mean they’re, they, I think about ninety-five percent or their stuff is Australian made or provided, like they really try hard and they’re the first supermarket to say that they are going try and cut back on their artificial additives, like they try and source as much as they can. Yeah, so good on them.

The changing sentiment of Claire, and her (likely) high-resource friends, towards low-cost items is also reflects what has been termed ‘new thrift’ (Jensen 2012). It is both reflective of a changing market place, with new options like Aldi challenging the traditional perceptions of low-cost goods being of poor quality, and of the changing public discourse around thrift in the post-GFC era. Both Goode and Jensen’s work has emerged from observations of British society where the GFC has hit hard. In Australia, the effects of the financial crisis of 2007/08 were considerably less severe than those of most other western countries (ABS & Reserve Bank of Australia 2013). Nevertheless, an attitude of greater financial uncertainty and a need
to live within one’s means has certainly infiltrated Australian life, and was particularly relevant during the data collection period of February to October 2010.

One participant, Annabelle, differed significantly to the others the high-resource group in her approach to saving money. But, by carefully examining Annabelle’s account of her food shopping practices, we can see the same theme of ‘opting-in’ to frugality does in fact underpin her approach, which superficially presents as ‘opting-out’. Annabelle took a very disciplined approach to saving money in her day-to-day shopping practices. She did almost all her fruit and vegetable shopping at a large suburban market, getting up at 5.15 am about once every two weeks in order to get there and back before her husband went to work. Like other women in this group, Annabelle made sure she prioritised quality, but was ‘always’ looking for specials, as she did not want to pay more than she ‘had to’ on her groceries. She had even set up a special arrangements with her butcher to buy meat by the carcass. She purchased a whole lamb (for $160), or hindquarter of beef, at one time in order to secure “fantastic” quality meat at well below the retail price. However, Annabelle was able to ‘opt-out’ of this frugal mode of shopping when it suited her, as demonstrated when she mentioned buying “indulgent” cheeses such as “triple brie” at her local deli and in her discussion of visiting farmers markets:

**ANNABELLE:** Oh, I go to farmers markets, [INT: Oh right.] and that’s not out of necessity, that’s just because I like to go and just buy things that appeal. […]

**INTERVIEWER:** Because what sorts of things are there? Is that…

**ANNABELLE:** Lots of fresh produce, um, then they’ll have dried fruits, salad dressings, cakes.

**INTERVIEWER:** Ok, so that is more just an enjoyment thing for you?

**ANNABELLE:** Its not out of necessity, I just like to go and browse, and buy some interesting things.

So, while Annabelle strictly disciplined herself around her food shopping practices, and indeed had by far the lowest expenditure of all Area B participants, the primacy of quality over cost remained evident throughout her interview. The fairly consistent ‘need’ she expressed to save money was perhaps betrayed by her more extravagant spending on some items, which, being done with little self-criticism, indicates hers was an active choice to ‘do the right thing’ and save money wherever possible, rather than a basic financial necessity. Thus, Annabelle also ‘opted-in’ to a somewhat
frugal mode of shopping, but was more consistent in her discipline in this area than others in this group.

**How did low-resource participants construct themselves as 'good shoppers'?**

*Food shopping on a budget*

In contrast to the high-resources group, the frequency of shopping trips, retailers utilised and types of products selected by the low-resource participants all pointed to the salience of thrift in their constructions of themselves as 'good shoppers'. These participants tended to buy most of their food from the big supermarkets. Jacqui did all her shopping at one major chain supermarket, Tamara and Louise shopped at both Aldi and a major chain each week, and Linda regularly shopped at one major chain, but liked to go to Aldi and other shops or markets when she got a chance. All participants in this group spoke of needing to keep to a tight budget as they shopped for food, indicating that saving money was very important. Talk around getting ‘good value’ when food shopping was therefore often related back to the household food budget:

*LOUISE*: We try and spend um, a hundred and sixty dollars um, you know, a week, on groceries, and that will encompass meat and vegetables, as well as toiletries and dog food and everything.

*INTERVIEWER*: Deodorants and everything... yep.

*LOUISE*: And so, now and again we’ll have to go over that... um and we won’t be happy. And every now and again we’ll be under it by twenty dollars and we’ll be very happy. Um, I think that, you know, if you can feel that you’ve, you know, fed the whole family, for a certain amount of money. And you know, perhaps thrown in a few treats or, you know, a chocolate bar or you know one of these desserts [pointing to picture], you know something like that every now and again, then yeah, you can feel that you’ve got value for money.

Here, Louise explicitly referred to the discourse of thrift, noting that going over budget was essentially ‘bad’ for the family, and having leftover money once the shopping is done and the family fed was ‘good’.

In order to meet tight budgets, shopping routines in these lower resourced households tended to be very disciplined in terms of when, where and how they shopped. Tamara emphasised the importance of being diligent when food shopping:
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TAMARA: Yeah well these days you’ve got to be [organised], because otherwise, you could go to the shops and if you don’t have a shopping list, you will spend hundreds of dollars because you’ll think, oh, I need that and then you realise you don’t need it... so you are doubling up a lot.

While Tamara was more structured than most in her use of shopping lists, here she highlights concerns that were common in this group. She draws on a discourse of thrift to position both “doubling up” (buying more than is needed for the coming week), and ‘excessive spending’ as poor practices. She paints these undesirable actions as traps for the ‘unwise shopper’, easily slipped in to without due care and attention.

The above excerpt demonstrates some of the ways in which participants in this group disciplined themselves when shopping for food. But, for some participants there were also external factors that limited their food shopping practices:

LINDA: Well we do a bulk food shopping, usually on a Wednesday night, but it’s usually every fortnight. My husband, he’s paid weekly. I used to work and get paid weekly, but now I just get what I get from Centrelink for the kids. So on that fortnight that I get money from Centrelink, we don’t do much shopping, but the week after that, my husband does the shopping with his pay, but I go with him.

Linda’s discussion here of her week-to-week shopping patterns highlights the effect that her family’s limited cash flow had on her food shopping patterns. All four participants in this group aimed to shop on the same days each week or fortnight, with at least one other participant who related this to their pay day. This external factor was not only a restriction in itself, but without funds readily available to purchase more food on the last few days before pay day, low cash flow further increased the need for thrifty practices when food shopping.

A focus on the cost, or price of foods

When discussing their perceptions of value when making food choices, these participants focussed on price both directly and indirectly.

A direct focus on price when food shopping was evident in these participants’ extensive knowledge of the exact prices of specific food items and the range of low cost options available. It was clear that these women were highly skilled and adept at saving money. They consistently employed a variety of cost saving strategies including checking catalogues for weekly special deals, searching for items reduced
for quick sale, selecting the low-cost, generic branded items and experimenting with a range low cost food items. A focus on the price of food items was often linked to ensuring that enough food was purchased to last until the next trip to the supermarket:

JACQUI: I buy [Wheelies biscuits] because I can, for three dollars, I get twelve [serves of four biscuits]. So if I buy two packets that’s twenty-four, which lasts for the school lunches for the week. [INT: OK.] So it would be a... and sometimes I do buy the potato chips [crisps], once again, mainly my choice is because for the five dollars I can get twenty, that do for the week, where as anything else comes in boxes of six. So if I buy something with six in it, and it is costing me three dollars and I have to buy four packets of them... [INT: Sure…] So chips, is based on price.

INTERVIEWER: OK, alright. And so, so with the... the maths... I was a bit slow on the maths (laugh)! So you are saying, the packets of Wheelies, you can get twenty-four?

JACQUI: Twelve in a packet, so I buy two packets, that equals twenty-four and I need to have twenty a week, twenty things.

INTERVIEWER: Twenty snacks a week? [JACQUI: Yeah] OK, so that is one each, for four children, five days a week?

JACQUI: That’s right.

Jacqui’s explanation here of her thinking around lunchbox snacks for her four children displays her emphasis on the relative cost of the various options available. The family’s needs are clear, everybody must have a snack in their lunchbox each day of the week, so she sees her task as a ‘good shopper’ to secure 20 snacks for the lowest possible price. Her thorough knowledge of the prices and quantities offered by different snacks illustrates how she frames the best ‘value’ choices using a cost per item type calculation.

While the cheapest items were often talked about as being ‘good choices’ by these participants, price was not the only consideration in their food choice decisions. In order to get the best value possible when food shopping these participants also thought carefully about the quality of the items they were buying, weighing this up against price:
LOUISE: Um, I don’t buy sweet biscuits at Aldi’s because um, the, the taste of them. They, they’re four dollars for a family box, a family packet, and that’s the same at Coles. […] At Coles you’ve got, usually you’ve got Arnotts, um, the Coles brand, and I think Paradise […] to choose from, and there is usually one of them on special. And um, if I can get a family packet of biscuits for under four dollars, I think that’s great. And at Aldi’s you’ve only got the one brand to pick from, um, and they, tasted like Homebrand biscuits. And we said, you know if we are paying four dollars for a packet of biscuits, we really want nice biscuits.

Here, Louise demonstrates that although she wants to spend ‘under $4’ on biscuits, quality is also important. For Louise, ‘high quality’ biscuits are those that taste ‘nice’ which here she distinguishes from the generic “Homebrand” biscuits which she infers taste ‘bad’. Louise also uses the collective noun “we” several times in the above extract, indicating that while she is the person physically doing the shopping, she is both spending money, and making food purchases on behalf of her family unit. Louise, like all participants, was constantly mindful of her family’s preferences. The way in which she drew her knowledge her family’s wants and needs here demonstrates how her perceptions of quality were in fact a family, rather than an individual affair.

By turning to another similar discussion with Linda, we can see that the way participants in this group paid attention to quality in this collective sense indirectly fed back into the morality of thrift:

LINDA: And they have this fruit and jelly. I’ve tried the ones at Safeway but the kids won’t eat it. They eat these ones that are at Aldi’s, so I have to go to Aldi to get them.

Here, Linda briefly alludes to the quality of preserved fruit snacks available at Woolworths [Safeway] supermarkets compared to those at Aldi. The indication of good quality here again is taste, or rather her children’s perceptions of taste. Linda knew from previous experience that buying the fruit snacks at Safeway was an ‘unwise’ choice, as her children were likely to reject them. We can see then that items that were deemed to be ‘better’ quality by the family were also most likely to be used and consumed as intended, which for the participant minimised the risk of waste, and thus offered the best ‘value’ for money.
Tamara’s attitudes towards selecting children’s snacks again highlight these issues. Providing fresh fruit for school snacks was seen as ideal, but often problematic in many households, including those of these low-resource participants. It was universally acknowledged that schools encouraged the inclusion of fruit in lunchboxes, but it was not unusual for fresh fruit to return home uneaten. While on the surface, mothers laughed about this common problem, it touched on a serious issue in the context of a limited food budget:

TAMARA: I do, I always tend to have bananas, right... [INT: Right.] But I’ve found that sometimes, or lately especially, the bananas go brown in my fruit bowl, and I just sit there and look at them, and I think that’s money that I have just thrown away, that I’ve now just got to throw in the bin, because they just don’t eat it. Or if I do, and I’ll put it in their lunchbox myself, it keeps coming back (laugh)!

Like Linda, Tamara also mentioned buying processed fruit jelly snacks for her children. Tamara specifically noted that she found the longer shelf life of processed fruit to be far more convenient than fresh fruit. She also expressed that although in her opinion it ‘counted’ as a serving of fruit, it was perhaps not an ideal choice:

TAMARA: I’ll look at [the fruit in jelly] and I’ll think “Well at least they are getting, I know there is lots of sugars and everything in this, type of fruit, but at least it’s fruit.”

Nutrition- a desirable, but optional extra?

The discourse of quality was not totally absent in these mothers’ constructions of themselves as ‘good shoppers’.

As some of the quotes above have demonstrated, these participants often balanced considerations of quality with cost in order to calculate the most thrifty purchases, which to them represented the ‘best’ value. The health considerations around food items, while positioned as desirable by these participants, were often usurped by disciplinary strategies that centred around thrift. These mothers had a good understanding of which foods were more ideal from a nutritional point of view, but felt that in their circumstances, these were not necessarily always the ‘best’ option for their family:

JACQUI: I get bread too around that area. So I then buy five loaves of bread. White bread, I know it’s not the healthiest choice, [INT: Oh well...] but once again, I buy the cheapest. And I have been buying the toast, because they sort of get a nice big square, sandwich.
INTERVIEWER: Oh Ok, so it is sort of a bit more sandwich in there. And um, and you said ‘I know it’s not the healthiest’. so what do you..?

JACQUI: I’m aware, like that the brown breads are better for you.

INTERVIEWER: Yeah... and so why don’t you choose the brown bread?

JACQUI: They are a little bit dearer…

Jacqui was keen to demonstrate her nutritional knowledge here, and by justifying her choice to me, she ensured that she would not be characterised as ‘unknowing’ about food and health. But here, for Jacqui, the functional considerations of bread are more important than the form it took (Bourdieu 1984). She deliberately chose the bigger, thick sliced ‘toast’ loaf as it would do the good job of ‘filling up’ her children for a low price.

Contrary to the dominant discourse on socio-economic status and inequalities in diet, a lack of knowledge was not always underlying the choices that these low-resource participants made which did not align with nutritional recommendations. As other similar studies have explored in depth, the low-resource participants in this study tended to rely more heavily on lay discourses around food and health, rather than scientific discourses (Coveney 2007). For example, Tamara spoke of buying snack-sized chocolate bars so her boys could “have a bit of chocolate, which is energy, at school” and pointed out how the chocolate yoghurts she bought had “a lot of calcium in [them] which is good for their bones and teeth”. As Coveney notes, the lay discourses employed around food and health demonstrate an emphasis on the functional aspects of food rather than form they take.

The way that the low-resourced participants reacted to the photographs of the ‘healthier’ trolleys revealed further, how foods that were healthy from a nutritional perspective, while certainly desirable, were not essential. Here, Linda describes the type of shopper she felt might be purchasing the ‘healthy/low cost’ food pictured in the photograph of Trolley D:

LINDA: Um, this one... I’d say this is a fit family.

INTERVIEWER: A fit family?

LINDA: A healthy family I mean.

INTERVIEWER: Yeah? So that’s trolley D?

LINDA: See lean meat, that’s trolley D is a healthy family. You’ve got the bars, you’ve got the multigrain bread you got the oats, and the pasta
is organic, and you’ve got a lot of fruit and veg, and you’ve got the extra lean meat. Light cheese. And light milk.

INTERVIEWER: Can you tell me a bit more... what else um, in what way are they... like, can you just give me a bit more detail?

LINDA: I would say that they are a healthy or watch what they eat kind of a family. [...] But yeah, I reckon they like to, they are into their organic food as well... or keep healthy. Just by looking at their trolley.

Linda, like other low-resource shoppers acknowledged that this trolley contained healthy foods, but did not identify this selection of groceries with her own. She distances herself and her own family from this ‘other’ family through her description of them as a “fit family”. Other participants in this group did similar things, describing the imaginary shoppers as being from a “really healthy” family (Louise) or a “healthy, fanatical type person” (Tamara). They did not criticise these healthy choices as such, rather they positioned them as one option: a certain way of shopping, but done by people with a different set of priorities to their own.

For these low-resource participants then, ‘good nutrition’ was positioned as an optional extra when food shopping. As Tamara summarised, the health value of a food item was a consideration when shopping, but for her it came after all the other more essential bases were covered:

TAMARA: And so you tend to buy what you know your children are going to eat, you know, and what everybody’s happy with, and then in amongst all of that, you try to do the best you can to make it as healthy as possible.

7.3.3 High- and low-resource participants as ‘good mothers’

It is well established that food in the family context is inseparable from powerful ideas around nurturing, sharing, enjoyment and love (Cook 2009; DeVault 1991; Maher et al. 2010a; Warin et al. 2008). Both generally and in the context of food, shopping is one way in which love is expressed in family relationships. By purchasing items that are wanted, or known to be wanted or enjoyed by those close to us, shopping provides a means through which love can be transformed into a material reality (Miller 1998).

Using a governmentality lens to interrogate the data revealed that the moral ideals that influenced perceptions of value, and in turn food shopping practices, had their roots in a much broader field of family activities- both food, and non-food
related. In the ‘messy’ context of everyday life, the maternal disciplinary strategies and moral ideals connected with food shopping were therefore impossible to separate from the much broader context of ‘providing’ for the family within which food shopping resides.

The notion of ‘provisioning’ helps to understand the complex role that these participants had as mothers in their households. The broad notion of provisioning has been defined as the endless, ongoing “work of securing resources and providing the necessities of life to those for whom one has relationships of responsibility” (Neysmith & Reitsma-Street 2005, p. 383). Here, I employ this concept to contextualise these participants’ perceptions of value around food, because it not only highlights that there is more to the work of food shopping for a family “than we can see inside a store” (DeVault 1991, p. 58), but also because provisioning food is just one aspect of a mothers role in caring for her family.

Therefore, I now turn to the ways in which participants with high- and low-resources spoke about their food related activities beyond the act of shopping. Practices such as controlling food intake, preparing foods and balancing the household budget had a bearing on how they constructed their perceptions of which foods offered good value, and these were central to how they constructed themselves as ‘good mothers’ who nurtured and cared for their families.

**How did high-resource participants construct themselves as ‘good mothers’?**

High-resource mothers often constructed themselves as ‘good mothers’ by distancing themselves from practices that they equated with those of a mother who was not providing food for her family in an appropriate manner. For example, Emma described how she viewed the choices made by the shopper purchasing Trolley B (cheap/less healthy foods):

*INTERVIEWER: What sorts of things do you think they are thinking about if they are not thinking about health? Can you..?*

*EMMA: Oh I think just quick easy things, give the kids things they like.. um, this is easy to cook, sausages, um, cheesecake you just get out of the packet and um.. Like the kids are obviously having white bread, and salami on their sandwiches. [INT: Mm hmm.] Yeah, I don’t think there is, yeah... it’s just feed them, don’t think about what it’s doing or it’s just trying to, get through.*
As Emma implies here, as other high-resource participants did, a ‘good mother’ knew which foods were healthy, and followed through by applying their knowledge and making ‘proper’ choices, according, of course, to a nutritional discourse. The importance of being ‘in control’ of foods and the decisions made around foods is highlighted here. Emma’s reference to the shopper “just trying to get through” implies they are short-sighted, and thus out of control which leads to less than ‘ideal’ food purchasing choices from a longer-term perspective.

Highly-resourced participants also constructed their own provisioning practices as ‘proper’ by employing notions of knowledge, awareness and control. Here, Ruby describes how she ‘watches’ what her children eat:

_**RUBY:** That’s one thing that I watch is vegetable consumption, because they are not great at veggies._

_INTERVIEWER:_ And can you just tell me, I suppose, your thinking with that, like watching what they eat in terms...?

_**RUBY:** Well, I am just very aware of them needing to have a good range of all the different colours of fruit and veggies, and if I know what they have had for fruit in their lunchbox, or at school during the day, and I know that I’ve given them two or three other types of vegetables during the day, then I feel like I have done a good enough job. And they’re not eating too much rubbish, and not balancing it out with other healthy things as well._

Ruby explicitly refers to her responsibilities as a mother when she talks of doing “a good enough job”. She draws on the nutritional discourse, constructing herself as ‘well informed’ about the types of foods her children should be eating (e.g., “good range”, “different colours”). However, here knowledge alone is not enough to position oneself as a ‘good mother’. Ruby highlights how she monitors what her children have eaten, being careful to control the foods available to them in order to promote a ‘healthy’ balance.

The last section of Ruby’s quote above touches on another issue within this notion of control that was important to the construction of the ‘good provider’ and ‘good mother’ for these participants. A dual meaning of ‘balance’ (Pajari et al. 2006) around food was evident. Balance for these mothers not only meant ensuring that the family’s diet was healthy in a nutritional sense, but also that the family enjoyed their food. For these mothers finding the ‘right’ balance of foods presented them with a ‘fine line’ that they had to negotiate, which is common in current, intensive, mothering discourses (Hayes 1996). It was necessary to carefully monitor and
control the types of foods their children ate, but being ‘too controlling’ or ‘over the top’ in this regard was positioned as ‘improper’:

INTERVIEWER: Great, and none of the big chains? Maccas, KFC or any of that stuff?

CLAIRE: Well my children know... they have never been to KFC. That sounds mean. They definitely have been to McDonalds, and if we go on a long trip somewhere, look it’s clean and it’s got toilets, and I have no problem with that, just saying to the boys “OK, look, just choose something” […] They’ve heard about the popcorn chicken [at KFC] (laugh) from all their friends, it’s really nice, but they’ve never been. But that is not, saying again, it sounds like I’m the militia. They are allowed to, but it’s just a very special treat, and it’s every now and then.

Claire struggles here with the competing discourses around what it means to be a ‘good mother’. Ultimately, her construction of herself relies on an implicit notion of ‘tough love’ (Jensen 2012) as she drew most strongly on the nutritional discourse which positions fast foods, such as KFC and McDonalds as unhealthy, and thus undesirable. However, in her role as a nurturing mother, she has to reconcile her hard line approach with her desire to provide her boys with foods which they clearly desire, and the potential social implications this restriction may have in the context of their peer relationships. As we saw in Bronwyn’s description of lunchbox foods (see p. 147) providing foods that ensured children ‘fit in’ socially was important in food purchasing decisions. In Bronwyn’s example, it was important for kids to eat healthy and tasty foods, but here we can see there are social considerations mothers must take into account around less healthy ‘treat’ foods too.

These constructions of ‘good mothers’ as those who are in control of the foods their family eat, highlight how the form that food took overshadowed its simple functional attributes. This is particularly evident in two specific practices that these high-resource mothers incorporated into their regular food provisioning tasks: controlling the composition of family foods and encouraging children’s intake of ‘desirable foods’.

Controlling food composition

Self-disciplinary strategies in light of this morality of quality were not limited to decisions made in the supermarket. Mothers in this high-resource group tended to spend significant amounts of time and effort preparing most meals, and many other foods, from scratch. Mothers in this group all expressed their enjoyment of cooking...
to some extent, but some, in particular Claire and Annabelle, described themselves as having a passion for cooking. All mothers spoke of preparing ‘homemade’ meals and foods as ‘best practice’, and these were often discussed with reference to less desirable packaged, processed or pre-made foods:

BRONWYN: Probably in the last, yeah, eighteen months to two years I have gone from not buying commercially, you know biscuits and things like that, and well it’s kind of like, well, if you really want it... cook it. [INT: Yeah?] Yeah...

INTERVIEWER: And you prefer that?

BRONWYN: Yeah, I think it’s better for the kids, because I think you also know what’s in it. [INT: Mm hmm.] Then, and there was all that trans-fats, kind of stuff. [INT: Oh OK.] And you know, um... I read somewhere about, you know, if a packet of biscuits can last this long... you know... what’s in..?

INTERVIEWER: Sitting on the shelf?

BRONWYN: Yeah... what’s in it? And it’s either preserved by salt or sugar.

Most importantly however, this act of preparing foods from scratch gave these mothers control over the composition of the foods that were eaten by their children. Foods that were home made in this way were positioned as the best ‘value’ options available because their composition was of the highest possible quality, and under the direct control of the participant.

**Mother provides, child decides**

While limiting the consumption of certain ‘bad’ foods was important, so too was encouraging the consumption of ‘good’ foods. As above, these mothers often spoke of providing an ample supply of ‘healthy’ foods. However, getting children to eat ‘healthy’ foods, such as fruit, in adequate quantities required both skill and effort. A common strategy employed entailed carefully demarcating which foods were available for consumption at a particularly time, and then stepping back to allow the child to select which of the available options they would prefer to eat. In this way, mothers disciplined themselves, in order to direct the food intake of their children:

ANNABELLE: [I buy] lots and lots and lots of fruit [...] in summer, it’s all your stone fruit, your mangoes, bananas. My girls love bananas, apples, watermelon, strawberries. Anything that I can get my hands on, I’ll buy.
and later:

INTERVIEWER: And so how does that, I suppose how does the fruit fit in to everyone’s day? I’m quite interested, I’m always interested in…

ANNABELLE: (laughing) Oh, they eat it...

INTERVIEWER: Yeah, sort of when and where it gets eaten?

ANNABELLE: All the time. Well my daughter at school, she gets it packed into her lunch bag for a snack and then probably a little bit for lunch as well. Depending on what she wants to take that day. Um, my other two, must take fruit to kinder [pre-school] as their snack, that’s a kinder policy. And in terms of them being at home, they get fruit for morning tea, and afternoon tea. That’s just the way it is (laugh)! [INT: Yeah…] They get other stuff, but it’s “What fruit would you like for morning tea?”

INTERVIEWER: Sure, so it sounds like with all the girls, they have a bit of input then into..?

ANNABELLE: Oh absolutely, yes. I figure if they have some choice, then they’ll eat it.

This technique is reflective of the ‘mother provides, child decides’ approach (Satter 2000) to child feeding, which is currently regarded as ‘best practice’ in the Australian public health nutrition field (Campbell et al. 2008; Daniels et al. 2009). As seen in Annabelle’s description of how fruit ‘works’ in her house, high-resource mothers have internalised these expert discourses, not only in terms of what to foods to choose, but also in how to manage their children’s food behaviour. They regularly draw on these discourses, using them to guide their own practices around food with the aim of ‘correctly’ managing those of their children.

How did low-resource participants construct themselves as ‘good mothers’?

Low-resource mothers also talked of the importance of controlling the types of foods that flowed through the house. However, their circumstances seemed to give them a different emphasis to that of high-resource participants when constructing their understandings of ‘proper’ behaviour of a mother in providing foods.

With an emphasis on saving money, participants in this low-resource group were concerned with minimising waste. Their key task in providing food for their families appeared to be ensuring that all members of their family had access to an adequate amount of acceptable and enjoyable food. As in other studies of low-income women, getting everyone fed (Burns et. al. 2013; Wills et al. 2011) was their top priority. Two
specific practices demonstrate how these mothers constructed themselves as ‘good mothers’ in this way: controlling who eats what, and controlling what gets eaten when.

Controlling who eats what

In contrast to the high-resource participants, these mothers drew predominantly on the discourse of thrift when they described how they controlled the food intake of members of their families. Issues of rationing and efficiency were central to the management of food within these households, and it was not unusual for the quantity of foods purchased to take priority over the quality, as the following quote from Louise demonstrates:

LOUISE: Then you have got like your dairy sort of stuff. So I buy um, a block of tasty cheese, which at our house we call ‘grown up cheese’. [INT: Right.] And then I buy a packet of plastic cheese (laugh) which is the ‘kid cheese’. Because I just find that um, it’s I don’t know, the kids would just eat cheese till it’s coming out their ears, so I just try and... restrict it, because cheese is one of the more expensive things on the shopping list. [INT: Sure.] Um, so that’s, that’s how we do the cheese.

INTERVIEWER: So, does that mean, the kids don’t eat the... the block? [LOUISE: Yeah.] Is that by your choice or by their choice?

LOUISE: Mine. (laugh) Um, when we have spaghetti, you know I grate the cheese for the top, and we also have parmesan, so there is a choice there. But you know if they, say they want cheese and Vegemite in their sandwiches, or, um, on the weekends we have um, toasted sandwiches in the press. And, so if she says she want’s ham and cheese, well she’ll get that cheese.

By purchasing the cheaper “kid cheese” as a substitute for the more expensive, higher quality “grown up cheese”, Louise is able to successfully satisfy her children’s appetites for this tasty food item while still keeping to the food budget. As indicated by her slightly uncomfortable reference her selection of “plastic cheese”, we see how Louise’s low-resource context, and her attraction to the morality of thrift, meant the ‘best’ options in some situations were foods known to be of inferior quality.

In this example, the functional aspects of food were again most important. For Louise, considerations of quality and perhaps health, were secondary to ensuring everyone had enough to eat. As another study of family food practices (Wills et al. 2011), there was little emphasis in this group on attempting to mould the preferences
of children towards what mothers felt they ‘should be’, beyond simple attempts to encourage the eating of fruits and vegetables. These mothers tended to accept the tastes of their children as more or less fixed and were willing to work around them in order to shop efficiently, and focus on purchasing foods that would not go to waste. As highlighted by this excerpt, it is likely that trying to shift and then maintain family preferences toward higher quality, or healthier, food items would require a significant, ongoing financial investment, one which would not be desirable in the these participants’ tough financial conditions.

**Controlling time and place for consumption**

All participants, at varying times, spoke of buying particular food items with specific occasions in mind for when they would be consumed. For this group of participants however, ensuring that foods were eaten at the allocated times was particularly important.

The importance of managing the flow of food in Jacqui’s construction of herself as a good mother was revealed when she discussed how baking cupcakes for her children fit within her food provisioning practices. Prior to this conversation, Jacqui had discussed some challenges she faced managing her children’s consumption of breakfast cereals. She had nervously laughed as she described how cereal took up a significant portion of her weekly food budget, and how her four children ate it in large quantities. They tended to eat it not only at breakfast time, but also as an after school snack:

*JACQUI: We make a lot of um, cakes, with the... I get the Coles brand cake, packet. Its sixty-seven cents and it has just got the, basically the flour in it, and you just add the egg. So I buy say a chocolate and vanilla cake, and they often make cupcakes out of them.*

*INTERVIEWER: Mm hmm, and is that something that they do... when do they do that, or...?*

*JACQUI: On the weekends, just through the weekends [...] Or, often towards the end of the week when the pantry is really empty, I might bake up some cupcakes when they come home from school, they’ve got, some cakes.*

*INTERVIEWER: So it’s like a little treat?*

*JACQUI: Like a treat, because there is nothing else left (laugh)!*

*INTERVIEWER: So it’s when all the cereal’s gone and the...?*
JACQUI: Yeah... (laughing)

INTERVIEWER: Nothing else to eat?

JACQUI: Or “I don’t want you touching the cereal!” (laugh)

INTERVIEWER: Oh, ok... that’s for breakfast tomorrow. So that’s management... a little strategy you’ve got?

JACQUI: Yes.

The threat to her construction of herself as a ‘good mother’ is revealed here by her imitation of the way she shouts at her children. Eating the last of the cereal would mean either an additional shopping trip to buy more cereal (which she reluctantly does some weeks), or going without sufficient food the next morning at breakfast time. Thus, the cheap, but enticing decoy of cupcakes play a pivotal role in Jacqui’s food management strategies, deflecting the risk of being a ‘bad mother’ posed by both spending more than she ‘should’ on the week’s food, or not providing her family with the type of breakfast they have come to expect.

It is important to note that Jacqui was one of only two participants in this group who spoke of coming close to running out of food. However, there were similarities with other participants in this group who also acted to protect their children from the worst effects of existing on a tight food budget. For example, Louise protected her children from the social stigma associated with low cost foods by choosing Aldi items over generic items in ‘black and white’ packaging (see p. 147).

**Provisioning goes beyond just food shopping**

The ways that low-resource participants constructed themselves as ‘good mothers’ highlight how the complex duty of ‘providing’ for a family was not limited to tasks around shopping for and preparing foods. The broader responsibilities that Jacqui feels in her role as mother, to nurture and provide an enjoyable life for her children, became evident when she reflected on the ‘frugal’ mindset that she assumed in relation to eating out and take-away foods:

JACQUI: Um, I’ll be honest, I’m very frugal is probably the word...

[INT: Yeah...?] and what we do is we save all year and then we take a holiday. We go away. So for two weeks, and in that two weeks we will eat out and we’ll spend money and have lots of fun, but for the whole year before we do that, we sacrifice to...

INTERVIEWER: You’ll be saving? Because I think I spoke to you when I was trying to organise this. You went away just recently?
JACQUI: To the Gold Coast, yes.
INTERVIEWER: Oh wow...
JACQUI: And then we are going away again in November!
INTERVIEWER: Right, so two holidays this year?
JACQUI: Yeah, yeah, so I am frugal all through the year and then we go away.

Although this comment was in the context of eating out, the stark reality of Jacqui’s circumstances are made clear here. Food is just one component of the family’s broader financial outlays. How much Jacqui spends on food, is intimately linked to the other experiences that she, and her partner, might or might not be able to provide for their family.

Not every mother with low resources spoke so explicitly about other family priorities in relation to their everyday food spending. Indeed, at the time of interviews, I did not actively seek this kind of information. However, Jacqui was not an isolated case. Discussion both before and during the interview with another low-resource participant Tamara, who was in a more comfortable financial position, reinforces that the way that participants constructed themselves as ‘good mothers’ through their everyday food practices could be related to other, non-food related aspects of family life.

When selecting foods for family meals, time-efficiency was of prime importance to Tamara. Pre-prepared, or quick and easy meals were very attractive to her, due to the busy nature of family life. Tamara did not spend a lot of her time cooking, a practice which she ‘admitted’ was not ideal:

TAMARA: I know I do a lot of fast food cooking. But that’s because one, I’m not a very good cook. And ah, two, we are pretty much always on the go doing something every day, do you know what I mean? So um...
INTERVIEWER: And just describe for me, just to make sure I know what you mean, I think I do, but when you say ‘fast food cooking’ what, what do you mean by that?
TAMARA: Well, just the meals that you put in the oven or, things that take like twenty minutes to cook up. It’s pretty much pre-done and you either just put it in the oven, or put it on the stove. And you either, basically, you are just reheating it... do you know what I mean? So it has already been made up.
As we were setting up for the interview, Tamara proudly described to me how she strived to “keep the kids busy” with extra-curricular activities like Little Athletics (www.littleathletics.com.au) and singing/dancing/drama classes. She explained how “everyone” wants to keep their kids busy to ‘keep them out of trouble’. Tamara implied that it was important for her to provide opportunities for her boys to participate in these positive activities, to reduce the risk of them becoming bored, and in particular, experimenting with drugs as they approached adolescence.

By considering these two separate snippets of conversation together, we can see that Tamara constructed herself as a ‘good mother’ through her attempts to create a secure, happy and safe environment for her children. In order to do this, she draws on the discourse of thrift when discussing her food shopping and preparation strategies. In this case, time, rather than money, is being traded off between food and non-food family activities.

In their broader provisioning activities, Tamara and Jacqui both draw on the ideals of intensive mothering (Hayes 1996) to construct themselves as good mothers. They put their children’s needs first. But, the ways in which the requirements of other, non-food related family activities impacted on their food practices, gives us a contextual understanding as to why, in this group, the role of food is a functional one. The foods selected for purchase needed to meet the basic needs of the family, but the pressures and realities of daily life in a low-resource context meant that the nutritional aspects of the food were not central to the way that participants in this group constructed themselves as ‘good mothers’.

### 7.3.4 High- and low-resource participants as ‘good citizens’

This section explores how participants’ perceptions around value in the foods they bought feeds into the way that they constructed themselves as individuals in their role as legitimate actors in society.

This subject position of the ‘good citizen’ points to the way that participants presented their food shopping activities in terms of the aims of the government of the population more broadly. They construct themselves as having a legitimate place within society as a ‘responsible’ and therefore ‘good citizen’.

Once again, participants from high- and low-resource backgrounds constructed themselves in this subject position in quite different ways, drawing differently on the discourses of quality and thrift, and nutrition and cost.
Each of the following sections begins with one participant’s response to the photograph of the cheap/less healthy ‘Trolley B’, as the ways that mothers from these groups constructed themselves as citizens, and the differences in how these two groups drew on discourse were most obvious when speaking about this particular trolley. The issues raised by these responses are then further investigated by turning to the way mothers constructed themselves as good citizens when talking about their own food shopping practices.

**How did high-resource participants construct themselves as ‘good citizens’?**

The responses from the high-resource participants to the foods pictured in ‘low cost/less healthy’ Trolley B were overwhelmingly negative. Their discussion placed the imaginary ‘Shopper B’ firmly as an ‘other’, with frequent and sometimes severe disapproval of their choices. Several of these mothers excused this shopper of their ‘poor choices’ by supposing that the purchases might be in the context of a ‘special treat’, but if not, they positioned this shopper as an ‘irresponsible mother’, and as such, an ‘immoral citizen’:

*BRONWYN: It’s kind of like, this is a bizarre trolley, because you are buying the no-name cheesecake, and the no-name this and the no-name Dick Smith peanut butter. [INT: Mm hmm, right…] But then you are buying the Coco Pops which are expensive, and the twenty individually [packaged] packets of chips [crisps], which is also expensive way of buying chips. So, but again, it could be a kids birthday party and they are making chocolate crackles with the Coco Pops, and you know… and so, it isn’t… d’y’know? You don’t know how it’s being consumed type of thing […]*

*INTERVIEWER: And if it was a regular basket… who do you think might buy that more regularly?*

*BRONWYN: Um… (pause) ah… I hope it’s not going into a child’s mouth. You just (half laugh) you know, I, speaking of children, you know, it’s hard they don’t do the shop, so it’s… your responsibility to buy well for them [INT: Mm hmm.] because you are setting up… their future health. [INT: Mm hmm.] So I… You know an adult, an adult makes their own choices. If they want to eat badly… buy that trolley. [INT: Mm hmm.] But I hate to think that its going into a child’s mouth.*

In her reaction to this photograph of Trolley B, Bronwyn strongly distances herself from what she sees as the ‘bad’ or ‘wrong’ choices being made by this particular shopper. Her alternative construction of what a ‘good’ shopper would do, is thick with references to the discourse of nutrition. She unequivocally makes the link
between foods purchased and eaten now having a significant impact on a child’s future health status. She positions the family food shopper (herself/other mothers) in the powerful position of holding sole responsibility for what a child eats, which is tested each and every time they shop for food. Thus, Bronwyn positions mothers as the main influence on whether or not children will develop into healthy, productive adults.

Central to these participants’ constructions of themselves as ‘good citizens’ was the notion of risk in the discourse of food and health (Lupton 2005).

BRONWYN: I had a friend with Meniere’s disease. And they have to go on a low salt diet... and, she was sort of saying, that she has got to buy products that are under two hundred, whatever it is... [INT: Something..?] of salt and... When you start picking that stuff up, and looking at it. [INT: Yeah..] It’s really quite terrible (laugh)! [INT: So, yeah.] So, so yeah, I s’pose having a few people around you with health problems, makes you start […] It probably makes you a bit more, foody kind of, conscious. To kind of go “We don’t have to go down that road”

For Bronwyn, the potential risk of future health problems associated with some ‘bad’ foods, while uncertain, still warranted her attention. Both knowing about these risks, and acting to minimise potentials risks were positioned as ‘correct’ and ‘proper’ actions of a ‘good mother’ and therefore of a ‘good citizen’.

This emphasis on future health, and mitigating the health risks associated with unhealthy foods was key to the way all mothers in this group positioned themselves as ‘good citizens’ when discussing their food practices. Several participants explained how their emphasis on protecting the health of their families were rooted in the values around food that they felt they had inherited from their own experiences as a child:

CLAIRE: I mean, I try and eat very healthily, but I think I do eat fairly healthily and I have been bought up, like my grandparents, my parents, were always into the huge variety, lots of vegetables. Um, I mean maybe I’m wrong, maybe I don’t eat that healthily compared to... but I think... [...] I just think my grandmother loved to make sure everyone was nourished within an inch of their life, and you know... my husband jokes to me, “Have you got every colour (laugh)!”? So it’s just, and we celebrate a lot around food my family, we all love cooking, and it’s just part of what we do.
By drawing on her understandings of food and health that were passed down in her family, Claire highlights how she, in her own way, mimics her grandmothers’ actions. In her role as a mother and food provider (as her grandmother was before her), the tasks of monitoring and controlling the families food intake, ensuring everyone is ‘nourished’ and bringing up ‘good eaters’ are central to her construction of herself as a ‘good citizen’.

This emphasis on bringing up ‘good eaters’ was also evident when these mothers spoke about the efforts they made in ‘teaching’ their children about food. They expressed a specific aim of passing on their understandings of ‘good taste’ to their children, in which they positioned healthy foods as desirable foods. This ‘training’ of children’s taste was touched on in the previous discussion of the strategy of ‘mother provides, child decides’ employed by these mothers (see p. 193), but was made even more explicit in other parts of the interviews.

Ruby, for example, who had the oldest children in this group, talked about the transition that occurred when her older children moved from their primary school, where the canteen offered a limited range of predominantly healthy foods, to the secondary school where the canteen was “just awful”:

*RUBY: This secondary school canteen, it is full of lollies, and chips [crisps] and dim sims and sausage rolls, and they are all frozen and then they are defrosted and cooked. They make fresh, fresh inverted commas [makes hand actions], things everyday, but it might be a cheese burger, or... it’s just awful. [INT: Right.] I have pretty much just said to my kids, and I think the excitement of going somewhere with a canteen was pretty great for the first couple of weeks, but I think now, they are just like “Ooooh, pretty crap food Mum.” [INT: OK.] So I think they are quite aware of it, and I know my middle daughter, the Year-Seven girl, she finds it hard because most of her friends go everyday to the canteen, so we’ve agreed that she’ll just get like a cool pop. So that is just like lolly water, and yes it’s got stuff in it that I know is not brilliant, but if that is, that’s the least of the things there that she could get-fine.

In this passage, Ruby is proud of the evidence she is able to put forward which demonstrates that she is doing a ‘good job’ of passing on her notions of taste to her children. She highlights how their initial reactions to the new food environment matured as they took on her constructions of the unhealthy foods on offer as “crap” rather than novel and exciting. She points out too, the more targeted interaction that she has with her daughter, who she had previously identified as having ‘weight issues’. Together, mother and daughter negotiate an acceptable, but self-disciplined,
way in which the daughter can meet both her specific nutritional needs (avoiding overindulgence) while still participating in the social act of buying food at the canteen and thus avoiding social exclusion.

**How did low-resource participants construct themselves as ‘good citizens’?**

The low-resource participants’ responses to the photograph of Trolley B (cheap/less healthy foods) were more positively than those of the high-resource participants. In general, the low-resource group were quite accepting of these foods as reasonable choices made by a ‘normal’ mother on a limited budget. For example, Linda describes how she felt the mother purchasing the foods in this photograph was doing an ‘acceptable job’:

*LINDA:* This one [Trolley B] is probably like more, budget wise...

*INTERVIEWER:* What do you mean by that?

*LINDA:* Like because of all the like this one would probably be my trolley (laugh)! […]

*INTERVIEWER:* They are watching their money?

*LINDA:* Watching their money, but as long as they have all the necessities in there, they’re fine. Especially for the kids lunches and things like that. […] Um, you have your basics, you know your milk, your bread. Um, if you are looking at things for lunches, probably. Coco Pops and the Coke Zero would probably be something like a luxury for them.

*INTERVIEWER:* Like a treat? Is that what you mean?

*LINDA:* Like a treat. Yep. Because Coco Pops you can get the cheaper brand, but maybe they like the taste, or spoil their kids with that one... Coke Zero, you probably wouldn’t see in someone’s trolley who was on a budget unless it was on special or something.

In this passage, Linda not only explicitly identifies the trolley photographed with her own shopping, but implicitly identifies with it too. The mix of cheap and expensive brands, which seemed odd to Bronwyn and the other high-resource participants, made perfect sense to Linda. For her, as long as a mother tended to the key tasks of getting everyone fed, sticking to budget and keeping the family relatively happy, then she was doing fairly well. Linda’s focus was on the present, not the future.

This present-orientated outlook explains why, compared to the high-resource participants, there was a notable absence of references to a discourse of risk and future health when these low-resource participants spoke about their food shopping.
practices. As noted previously, there was not a complete lack of attention to health concerns by these participants. But, in contrast to the high-resources group, these low-resource participants were far more attuned to health concerns that were of immediate and certain relevance to their families’ diets instead of those of a more uncertain nature, even if their risk had been formally identified as being higher than ‘normal’:

JACQUI: When you come around the corner, you’d have a choice of your cordials, then I would probably choose a cordial for the week.

INTERVIEWER: Yep, and what sort of cordial?

JACQUI: A Cottees cordial, I used to buy the cheaper brand ones, but my kids were having trouble with teeth, and so I stopped, just hoping you know, and I started buying a dearer brand cordial […]

INTERVIEWER: And has it, have you... has it made a difference? Or...?

JACQUI: I think so. I think it has...

INTERVIEWER: And so they were having problems, what... they needed to go to the dentist or...? Tell me...

JACQUI: Dentist... yes, yeah, they were getting cavities.

And:

INTERVIEWER: Margarine you mentioned on sandwiches...

LOUISE: Yeah, I’ll get, normally I get that at Aldi’s. I did go through a stage where I would get the Aldi’s one, and then I would also get, um, like a dairy free margarine... at Coles. Um, and then Aaron [husband] was having the low cholesterol [margarine], Logicol or something and we had three different margarines in our fridge!

INTERVIEWER: And did he have his... and did he know his cholesterol needed?

LOUISE: Yeah,

INTERVIEWER: A bit of watching?

LOUISE: Yeah... so... we sort of got out of that phase.

INTERVIEWER: Uuhh, and so you are just back to the normal margarine?

LOUISE: Yeah...
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All participants in this low-resource group shared this emphasis on the here and now as they constructed themselves as ‘good citizens’. Rather than a focus on risk, health and the future, these women emphasised the importance of their role in maintaining the family’s position in society as autonomous and self-governing. In doing so, they can be understood to be protecting themselves, and their families from the negative moral connotations that tend to be associated with being seen as ‘dependant’ (Fraser & Gordon 1994) on extended family members, the government or charities.

Just like the high-resource participants, some of these mothers reflected on their early life experiences when talking about their food practices. They discussed how they felt they had learnt some of their values around foods and a mother role in providing food from their own families:

TAMARA: I always, see, I’ve been brought up, I’m the youngest out of eight. So there was one thing we always had at home, and that was, bread, butter, milk. So, you would never go hungry, because you could always make toast, and even if it was just plain butter on toast, you would never be hungry at home. Um, having been the youngest out of eight Mum and Dad couldn’t afford biscuits, chips [crisps], lollies what have you, so that was our after school snack. We used to come home from school, we used to have our cup of tea, because that’s what they do. Cup of tea and two pieces of toast. That was our snack, after school. And mum always had Vegemite, you know, um and then of course they brought out the sliced cheese, so she’d always make sure that there was cheese as well...

INTERVIEWER: So that is something that is sort of fond…. from your childhood almost?

TAMARA: Yeah, yeah, it is. And I always make sure that I’ve got bread butter milk, vegemite, you know a spread, so toast... so that way we’ll never starve… you know? Um... it’s just, I don’t know, it’s just one thing that I have been brought up with. Just taken it on.

Although Tamara is in a relatively comfortable financial position compared to that of her childhood, she has taken on her family of origin’s understanding of the role of a ‘good mother’ as the provider of food. Tamara, through her emphasis on her task of ensuring her family will “never starve”, demonstrates how she has inherited a focus on the functional aspects of food. Even though Tamara can easily afford, and does indeed buy, the biscuits, chips and lollies that she wished for as a child, she still positions fulfilling the basic food requirements of her family, ensuring they have enough to eat, as her most important task.
The key tasks of getting everyone fed and sticking to budget were fundamental to the way that these low-resource women constructed themselves as ‘good mothers’. We gain further insight into how these notions of being a ‘good mother’ then fed into notions of being a ‘good citizen’ from Linda’s discussion of school lunchboxes:

LINDA: I like to make sure all compartments are full (laugh). I mean my step-mother, because her children go there too, she said to me… “You don’t have to fill it up!” and I went “Yes I do”. It's my kids, so fill them all up. They finish it! Sometimes, they come home with half of it.

INTERVIEWER: So does that just make you feel... that they are going to school..?

LINDA: Yeah! I want to know that they are actually going to school and eating […] They have a brunch club section at the school for those who don’t have lunches […] so you can go up to the brunch club and get like a sandwich, or fruit. [INT: Right...] And my son comes home “Mum, the girls were at the brunch club again!” And I was like “Oooo (angry tone)” (laugh)! Because sometimes I think, some teachers they keep an eye on who comes there often and things like that… (quietly) which I think is pretty rude. But...

INTERVIEWER: So... what... you don’t like that idea?

LINDA: No I don’t! I mean, it will make it look like I don’t feed my kids when they go to school. That’s why I give them a grilling. I mean I’m not, on occasion if I forget to buy bread, then I say to them “Ok, you can go up to the brunch club and get one thing.” But that’s it.

Here we can see Linda constructed the act of filling up her children’s lunchboxes as one way to protect herself and her family from the stigma associated with not having enough food. The interactions she described with her eldest son indicate she feels that she must teach her children the importance of being self-reliant, and how to avoid the socially unacceptable implications of taking ‘handouts’ such as free food offered at “brunch club”. In this excerpt, Linda constructed herself as being perfectly capable of managing her family’s food supply in such a way that enabled her to consistently provide adequate lunches for her children. Thus, by drawing on notions of personal responsibility and self-sufficiency in the way she manages her food budget, she positions herself as a ‘good citizen’.
7.4 Results from the mixed-resource participants

The final section examines how two participants with mixed levels of resources, Anita and Deborah, constructed themselves as food choosing subjects. Each participant and their family is briefly introduced and a description of the levels of economic, social and cultural resources they appeared to have at their disposal is provided. Then, I discuss the particular ways in which they drew on the available discourses in order to construct themselves as ‘good shoppers’, ‘good mothers’ and ‘good citizens’.

7.4.1 Anita

Anita lived with her partner Tony and their seven-year-old daughter Hayley in Area A, but unlike most of their neighbours, they had a high household income. Tony worked in a skilled, highly unionised, blue collar job which paid “over a hundred [thousand] plus per year” and Anita worked in the racing industry in a full-time capacity, but had flexible work hours. She also volunteered at Hayley’s primary school.

Despite their high levels of economic resources, Anita and Tony had a working class background which meant their overall level of resources was mixed. They had lower levels of social and cultural resources compared to other participants with similar levels of income who lived in Area B.

The best indication of Anita’s level of cultural capital is her taste when eating out. She described how she and Hayley would get take-away food from Red Rooster [BBQ chicken] as a weekly treat on a Saturday, but that Tony was reluctant to eat out in general, only occasionally eating a meal if the family went out together:

*ANITA: He just grudges spending money at someone else’s shop when you can, he would say, “make sandwiches and take them with you dear, don’t buy it.”*

Anita described herself as the “worst offender at eating out” as her job meant frequent travel across the state for race meetings. When out on the road, she found the quality of food varied. She described the ‘bad’ tracks as having food options limited to “a pie”, “a sloppy hamburger” or “chips”, and the ‘good’ tracks as having:
ANITA: Beautiful meals for the whole family. You could eat, whatever you wanted. You could have lasagne and fries, lasagne and salad, you’d have roast meats and salad, you’d have fried food, you’d have, [an] abundance of food.

Anita did not specifically mention her social networks during the interview. It seems likely that her main social network consisted of other contacts in the racing industry and her local community, and that Tony’s was predominantly comprised of his mates from work. From the information available, it seems that these social networks supported what can be described as Anita and Tony’s ‘working class’ taste for food, as illustrated by their preferences above and a focus on ‘traditional’ foods at home, such as roast meats and spaghetti bolognese and cold meat sandwiches for lunch.

**A ‘good shopper’**

Anita’s food shopping patterns had much in common with the high-resource participants. She shopped several times per week, and predominantly drew on a discourse of quality when discussing the kinds of foods she chose:

ANITA: Sometimes I’ll stay at the fruit and veggie market, they have a lovely deli selection there, so of late I have been buying it at the market. And I probably buy five or six different types of sliced meat and I buy my chicken there too ‘cause it’s quite nice […] we would buy, say, six slices of each, and then go back Sunday so it was fresh. So if I go in Wednesday, Wednesday to Sunday should last, and then I would restock on Sunday. So I’ve probably visit the market twice on their opening times.

Despite her attention to quality, Anita did not draw on the discourse of nutrition as often as the high-resource participants. She did frequently discuss her preferences for fresh foods, but references to the nutritional composition or the ingredients listed on more processed grocery items were notably absent in comparison to the participants in the high-resource group.

Anita’s level of spending however, was reflective of that seen in the high-resource participants, and was much higher than that of her low-income neighbours in Area A. She talked of the general moral ideal of saving money where convenient, but did not actively “hunt” for specials. She implied that the money she saved buying items in bulk was more of an added bonus, rather than her main focus:
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INTERVIEWER: Can you tell me a bit about your thoughts about what value when you are shopping means to you, or good value, or value for money?

ANITA: Well, as I said. We don’t have a problem. But umm, but still we tend to buy bulk. If we are buying, we buy bulk […] only because it’s easy at a store. Like if I am buying umm... boxes of breakfast cereal, I’m not going to buy a little one that is going to last two meals and then go back and buy another one. I don’t want to visit the shop every day. I want to be able to get through the week of shopping with only one visit, or two visits... at max to the shops, yeah.

As this quote demonstrates, Anita constructed herself as a ‘good shopper’ by employing the notion of ‘opt-in frugality’ in much the same way that the high-resource participants did.

A ‘good mother’

When constructing herself as a ‘good mother’ as she talked about family food choices, Anita drew on discourses of quality and nutrition. However, overall her approach was once again not completely in line with that of the high-resource participants.

Anita made a concerted effort to provide a healthy selection of foods for her family, particularly for her daughter, and had clearly internalised health messages about the importance of fruits and vegetables for health. She regularly bought large quantities of fresh fruits and vegetables from the local greengrocer so that her family always had a steady supply of good quality healthy foods. Anita’s construction of ‘value’ around other foods however, was distinctly different to that of the high-resource participants. In contrast to that group, she did not draw on the discourse of nutrition to talk about foods which should be restricted. For instance, while the high-resource participants tended to monitor their families’ meat consumption, and were wary of overconsumption, meat was purchased and consumed in large quantities in Anita’s household:

ANITA: Our meat bill is quite enormous, it’s surprising how, we probably spend I would say three hundred dollars a week on shopping, and that can grow more. We always have roast. We find it is cheaper to have roast pork, roast beef, roast lamb and a silverside, that is our four main meats we buy a week […] so our meat is very, very simple. We’ve got our sausages, our minced meat, because I make our homemade spaghetti Bolognese, our roast pork, out roast beef, our roast lamb, and a silverside.
In a similar way, some nutritionally unhealthy foods were not discussed by Anita as being ‘undesirable’ or needing to be monitored, instead, these just formed part of her family’s everyday food landscape. For example, Hayley would take chips (crisps) to school for lunch, and Coco Pops were always an option for breakfast, although Hayley rarely chose to eat them. At one stage, Anita even lamented Hayley’s lack of enthusiasm for some of these unhealthy ‘kid’ foods:

ANITA: I buy the little, the little umm, fruit ones [yoghurts] for Hayley. I only buy the little ones for her, and I think that they are a packet of twelve, two layers of six. Simply because if she’s hungry, she won’t eat biscuits, (emphasising each word separately) she’ll only eat yoghurt or fruit.

INTERVIEWER: Well that’s... (giggle)...

ANITA: It’s not good all the time though. It’s nice to have some rubbish food. She is a child, she is entitled to it.

Here, Anita’s description of a child’s entitlement to “rubbish food” draws on a discourse of nurturing, rather than nutrition, to construct which foods are ‘right’ and ‘proper’ foods for children to eat. For Anita, nutritionally unhealthy foods are not excluded from this role, nor was their consumption tangled up with feelings of anxiety, guilt, or a need for strict control as it was for the high-resource participants. In this passage, Anita implies that a child who eats no “rubbish” at all is ‘missing out’ on the pleasures of childhood. It seems then, that Anita constructs herself as a ‘good mother’, in part at least, by ensuring her child has access to some unhealthy foods, rather than restricting them.

A ‘good citizen’

When constructing herself as a ‘good citizen’ Anita, like the high-resource group appeared to be quite comfortable in her ability to maintain her family’s financial independence. She did not demonstrate any anxiety about her financial situation when she spoke about food, and differentiated herself from others in her local area who struggled to provide, what she felt, was an adequate supply of food for their families:

ANITA: I just wish there was more information out there for how families could survive on a low budget.

INTERVIEWER: Right, can you tell me...

ANITA: Maybe by commercials, or putting brochures in the newspaper or something.
Chapter 7 - Discourse analysis of the qualitative data

INTERVIEWER: And do you think, does that affect you? Like we talked about your budget...

ANITA: It probably doesn’t affect me, but there is a lot of people out there that think, like, you send your daughter to school with something to school and you think “that poor little child can’t afford that”. You just wish that there was something, there was some way that you could give it to the other families. […] Actually, Hillside [primary school] have a fruit day, where there is a local company that donates fruit. So it is taken around to all the classes for people that can’t put their two pieces of fruit in a lunchbox. They take them out on big platters, put them in each room and every child can try it. Now they could be exotic mangoes, it could be umm, blueberries, it could be apples it could be oranges, could be grapes, could be bananas... every room gets a platter of mixed fruits so they can try.

In this quote, as several above, Anita once again emphasised the importance of fruits in children’s diets. Here, she draws on the discourse of nutrition, constructing regular exposure to a wide variety of fruits as part of providing a ‘good start’ in life for children. Through her regular references to the wide range of fruits that are enjoyed by her child, she constructs herself as doing a ‘good job’ by providing a healthy food environment for her own child.

Overall however, Anita’s focus on food and health tended to be more short-term oriented than long-term. As outlined above, she did encourage the consumption of healthy foods, but she lacked the strong sense of risk in relation to food and health that was evident in the high-resource group. During her interview, Anita referred to Tony as having high levels of cholesterol, however, she noted how he only took limited actions in terms of monitoring or altering his food intake in order to minimise his consumption of foods high in cholesterol. Anita mentioned that she bought special “LogiCol” [plant sterol enriched] margarine for him, which he used as an alternative to regular butter or margarine, but otherwise his increased risk status was only occasionally mentioned, even when discussing his preferences for foods high in saturated fats such as cheese, sausages, bacon, potato chips (crisps) and deep fried calamari and chips. Anita explicitly noted that some of his preferences were not in line with an ‘ideal’ diet:

ANITA: Yup, yup, well yeah, because Tony will have cheese on everything (small laugh) hence the high cholesterol (big laugh)! Yep, yeah.
Anita’s laugh here is likely to be conveying at least in part a sense of concern for her partner’s health, but she did not articulate any direct concerns she held about the foods he eats, or express any desire that he should make changes to his diet.

7.4.2 Deborah

Deborah’s family consisted of her husband John, three teenage boys and their five-year-old daughter Ebony. Deborah worked multiple part-time jobs and helped out with a number of church-based activities including a community garden. John ran his own small business. Their household income aligned with lowest-income quintile and Deborah reported that things had been tougher financially since John had given up a secure job due to medical issues that were aggravated by his previous work environment. Deborah spent about $100 per week on food shopping and about $10 per week on food away from home, which was the lowest level of food expenditure of all participants interviewed.

Unlike some of the other participants with low incomes, Deborah displayed a strong interest in food. While the source of this interest was not discussed in the interview, it seemed to be supported at least by her social networks. When discussing attitudes to healthy eating, Deborah felt that she should admit to her biases that she thought might be coming from her volunteer work:

*DEBORAH: Oh look, I should probably be honest. I work with the community gardens, so I work with different user groups, umm, Sharon, that you gave the...*

*INTERVIEWER: The flyers to?*

*DEBORAH: She runs the food relief. I am sort of involved with that too... so I see those clients, and I hear about their priorities in life, and healthy eating probably isn’t one of them.*

Deborah’s taste when eating out was closer to that of the high-resource participants rather than other low-income participants, indicating she had high levels of cultural capital. Deborah avoided fast foods and take-away, opting instead to make her own pizzas at home. She and John ate out very occasionally with friends, but she commented how they could not afford to go nearly as often as their friends did, and she made an effort to put “a few dollars away every week” in order to go out at all. Sometimes they would even “share a meal or something” between them to save money. While it was not discussed, it seems likely that eating out with these friends may have been easier for Deborah and John prior to the change in John’s
employment, but it was clearly important for Deborah that they maintained their connections with this social network.

A 'good shopper'

As can be detected from her low overall expenditure, like the low-resource participants, Deborah was very disciplined in her food spending. Despite her very low weekly expenditure, she was self-critical about her overall approach to food shopping, expressing that she really “should” shop the “right way” which would be devise a “menu plan” for the week and only shop once. However, she found that working several jobs meant that she was not organised enough to do that, and usually ended up doing one large shop per week, with one or two smaller shops when things ran out. Deborah tried to compensate for these 'immoral' practices by diligently using a shopping list when she was at the supermarket and trying hard “not to deviate from that list”.

When choosing foods, Deborah described always looking for the cheapest possible options, but trying to maintain the quality of the foods she bought. The discourse of nutrition was important in her perceptions of quality. This was evident when she expressed her preferences for: low-fat cuts of meat such as chicken breasts or rump steak; fresh produce over frozen or processed; and cooking from scratch rather than buying pre-prepared foods. In order to secure some of this higher quality food at lower cost, she used strategies such as playing "spot the sticker" with her young daughter when shopping - looking for 'reduced for quick sale' stickers on fresh items like fruits, vegetables and meats at the supermarket. For other grocery items, Deborah almost always chose the generic brand or other low-cost item. At one point during the interview, she became self-conscious about consistency of her answers about how she decided which product to choose:

INTERVIEWER: Yeah. And do you have preferences for types of pasta or types of rice or types of noodles or..? […]

DEBORAH: It's whatever is cheapest. Yeah, it all comes down... gee I sound awful don't I?

INTERVIEWER: No no no, I'm pushing it, sorry.

DEBORAH: It all comes down to the almighty dollar.
A ‘good mother’

In contrast to the high-resource participants with whom she shared her taste for quality, a tight budget meant it could be difficult for Deborah to secure good quality foods. Despite her limited funds, Deborah held strong aspirations for the types of food she wanted to provide for her family:

DEBORAH: And then we might have custard... so you use more milk.

INTERVIEWER: You make custard yourself? […] Is that something you do often?

DEBORAH: Probably once a month... or we’ll make a trifle or something like that. Just because I don’t like to spend a lot of money on food, I don’t want the kids to feel like they are eating second class, or, they go without a lot... do you know what I mean?

We can see here that providing good quality food for her family was central to her construction of what a ‘good mother’ should do.

Much like the high-resource participants, Deborah tried hard to control the composition of the foods her family ate. She talked of cooking many meals from scratch, and expressed her approval of the two healthier trolley photographs by pointing out the high proportion of fresh ingredients they contained, which she took to mean that the shopper was cooking ‘proper’ meals rather than relying on convenience foods. While Deborah did not aspire to purchase pre-made foods, a discussion of a pre-cooked lasagne revealed some of the difficulties she felt that she faced as a busy mother with only a small budget for food:

DEBORAH: It’s quick, but you pay. Um I always say to my husband “You’ve either got time or money, you can’t have both...” So yeah, if you want it done really quick, then you pay, yeah, for the convenience.

INTERVIEWER: So then if you’ve got time or money, which one of those do you have?

DEBORAH: Probably neither. But I say to my husband, “I’ve got to make time... no I don’t, I have to find time”

INTERVIEWER: Yeah

DEBORAH: So I spend the time to do it, rather than pay.
In this excerpt Deborah demonstrated insight into the structural barriers that made her situation difficult, yet she positioned herself as totally responsible for ‘finding’ a solution.

Deborah spoke about time and money in the context of everyday family life in the same way as low-resources participants. For Deborah, the money she spent on food was intimately linked to other areas of the household budget, and although her techniques for doing so were distinctly different to those of the low-resource participants, she too tried to save money on food wherever possible:

DEBORAH: I try and grow food as well [...] at the moment we have got lettuces, rhubarb, corn, tomatoes, strawberries.

INTERVIEWER: Oh, real summer stuff isn’t it? And are there, have you got a couple of reasons for doing that? Or..?

DEBORAH: Money (quietly).

INTERVIEWER: Is it mainly a money thing?

DEBORAH: Yeah (quietly) [...] There are some things that you can’t cut back on, or save money on like your power and gas and your mortgage. But there are some things that you can. And that’s what we look to do all the time.

INTERVIEWER: With food that is?

DEBORAH: With food, yep.

As we saw in the high-resource group, Deborah’s taste for quality and nutrition was at times at odds with meeting the social needs of her children. For Deborah however, the main context in which this was an issue was the schoolyard. Deborah recounted how through her work on a food project, she had seen how many children in her area were provided with predominantly pre-packaged foods for lunch. She expressed some anxiety around her choice to instead provide her children with healthy foods in their school lunchboxes, even if this meant they stood out as ‘different’ in their school environment:

DEBORAH: Umm, well it’s really sad, because it’s probably cheaper for me to buy potato chips (crisps) than it is apples [...] Umm, so occasionally I’ll buy a kids chips. We were talking about it the other day saying that my two middle sons, they don’t have the same lunchboxes as everybody else... and that is really hard. But I won’t buy LCM bars [sweet snacks], and I won’t buy a lot of the things that the other kids have, because they are full of sugar.
INTERVIEWER: And so what do your kids lunchboxes look like compared to the other kids?

DEBORAH: Mmm sandwiches, fruit, my youngest daughter takes a yoghurt everyday, everyday. Um, I will buy a big bag [of biscuits], and give them a bit out of a big bag... do you know what I mean?

A ‘good citizen’

In constructing herself as a good citizen, Deborah again showed similarities to both the high-resource and low-resource groups. Overall Deborah worked hard to maintain her family’s status as autonomous economic family unit, but also to provide them with healthy foods in order to give her children a ‘good start’ in life and pass on her taste for healthy foods.

Many of the above quotes demonstrate Deborah’s strong desire to minimise her food spending in order to ensure her family remained financially independent. She talked about ‘sticking to budget’, even in tough conditions, as an absolute must. She constructed herself as a good citizen by taking on a role within the family ‘team’ as the ‘one’ responsible for carefully monitoring and controlling how the household money was spent:

DEBORAH: And I won’t, I won’t, there is a few Homebrand items I won’t use.

INTERVIEWER: Oh, can you tell me which ones?

DEBORAH: Oh, toilet paper I won’t use. It’s false economy because the kids use three times as much. [INT: Right.] The coffee is awful coffee so I won’t use that [...] I always say my husband works really hard for his money, so I’m going to spend it the best I can.

Another part of the role she constructs for herself involves training her children to be ‘good eaters’. The family’s tight financial situation means that by teaching the children to be careful and considerate in the way they consume family foods, they can assist her in ensuring the whole family has enough food to last between shopping visits:

DEBORAH: Its going to sound awful... but, my children won’t eat anything without asking me...

INTERVIEWER: Right... tell me about that. [...]

DEBORAH: If there is ice-cream, they won’t just eat ice-cream. After dinner they’ll say “Mum, can we have ice-cream?”

INTERVIEWER: That’s alright...
DEBORAH: And if I haven’t got anything else planned then I’ll say “Sure, have ice-cream” umm... where as I know some people, they lock their pantry. Because they will have a packet of biscuits, and the children will eat the packet of biscuits [...] they know to, even with sliced meats or anything in the fridge, they’ll say “Mum, do you need this for dinner tonight?” and if I say no, they’ll say “Then can we eat it?” So it’s just, they’re considerate, because they know that I’m really busy, and they know that I probably have an idea of what we are having for dinner... today and tomorrow, and that I have shopped for that, so don’t just eat it, and then I go to make it and there is no dinner.

Her approach to bringing up ‘good eaters’ is not however just limited to these practical, financial aspects. Much like the high-resource participants Deborah wanted to pass on her own notions of good taste to her children as they matured into adults. On several occasions she expressed how she wanted them to be able to experience and enjoy a wide range of healthy foods, but in contrast to the high-resource participants, she found it difficult to achieve this on a limited budget:

INTERVIEWER: Some mums are quite happy with everything that they buy, and other mums feel that what they buy, and what they want to buy are not quite the same... how do you fit into that? What do you think? Does that apply to you?

DEBORAH: Yeah, the latter. [INT: So you...] Not the former.

INTERVIEWER: So you’d rather be buying different things if you could? And what sorts of things...?

DEBORAH: I think a lot more red meat. [INT: Yeah?] Um, for the iron. Um, I’d like to venture into wholegrain breads and wholemeal pasta and brown rice and things like that. I want my children to be healthy... [clears throat] and I want them to try all different types of food.

INTERVIEWER: But at the moment you feel what’s...

DEBORAH: It’s hard. It’s very expensive.

INTERVIEWER: So it’s mainly the money thing that stops you trying those other things? [DEBORAH: Mmm.]
7.5 Summary of findings

This chapter has explored the complex ways in which participants could be seen to regulate their food shopping and management practices. Participants drew on the broad discourses of quality and thrift, and the more specific discourses of nutrition and cost, to construct themselves as ‘good’ shoppers, ‘good’ mothers and ‘good’ citizens. In doing so, they emphasised certain aspects of the moral discourses that circulated around ‘good’ food choices in order to construct their perceptions of value around healthy and unhealthy foods.

Participants’ levels of economic, social and cultural resources appeared to shape the ways in which they drew on the discourses of nutrition and cost to construct themselves, and their perceptions of different foods. Broadly, participants with high levels of all resources tended to draw heavily on the discourses of quality and nutrition. In comparison, participants with low levels of all resources tended to draw predominantly on the discourses of cost. However, the complex ways in which resources were related to different ways of perceiving value in healthy and unhealthy foods was highlighted particularly well by the interviews with Anita and Deborah, two mixed-resource participants, who each drew on the moral discourses around foods in ways that were both similar to and different from the high- and low-resources groups.

The findings from this discourse analysis are discussed more thoroughly in the next chapter. There, I explore, in more depth, the similarities and differences in the ways that participants with different levels of resource constructed their perceptions of value in foods, and link the current findings back to the broader food choice literature.
Chapter 8
Discussion of the quantitative and qualitative findings

8.1 Chapter overview

This mixed methods study set out to examine how income and socio-cultural factors contribute to the production and reproduction of socio-economic inequalities in diet. In order to answer this aim, one quantitative and one qualitative research question guided this study. The quantitative phase (Chapter 4) aimed to explore the relationship between household income and food purchasing patterns of healthy and unhealthy food items, while the qualitative phase (Chapters 5-7) aimed to investigate the ways in which participants from different socio-economic backgrounds perceived value in the healthy and unhealthy foods they purchased.

This chapter discusses the findings from each of these research phases in turn, placing them in the context of the relevant literature and considering the contribution they make towards answering the respective research questions and objectives. The findings from both research phases are drawn together, and examined in light of the overall research question in the following, final chapter.

8.2 Quantitative study discussion

The quantitative phase of this study set out to explore the relationship between household income and purchasing patterns of healthy and unhealthy grocery foods in Australian households. In order to do this, I undertook an analysis of the ABS HES guided by the following research objectives:

Objective 1a: To examine the relationship between household income and the allocation of food expenditure between healthy and unhealthy grocery foods in Australian households

Objective 1b: To compare the relationships that exist between household income and the allocation of food expenditure spent on healthy and unhealthy grocery foods between all Australian households and those containing primary school-aged children.
The findings of the HES analysis illustrated how households across five income quintiles allocated their grocery food expenditure between five healthy and seven unhealthy sub-groups, as well as examining the patterns of overall spending on the aggregate groups of total healthy and total unhealthy foods.

The following sub-sections discuss the findings from the quantitative phase in light each of the two objectives. The discussion of the findings in relation to the first objective, presented in Section 8.2.1, focusses predominantly on the results from the main sample. The findings from the main sample and those in the primary school sub-sample are compared in Section 8.2.2. A discussion of the limitations of the approach taken in this research phase is then presented, followed by a summary of the results highlighting the key findings of this research phase and the contributions of this quantitative study to the current public health nutrition literature.

8.2.1 The relationship between income and the allocation of food expenditure to healthy and unhealthy foods

Income-related patterns in the aggregate food sub-groups of total healthy foods and total unhealthy foods

When examining broad patterns of expenditure on total healthy and total unhealthy grocery foods, households in the lower-income quintiles allocated a greater share of grocery expenditure to healthy foods compared to those in higher-income quintiles. There were no discernible income-related trends across all quintiles for the sub-group of total unhealthy foods.

The findings of a small but significant negative income-related trend for the total healthy foods sub-group and no income-related trend for the total unhealthy foods sub-group are perhaps unexpected, given recent findings demonstrating a slight increase in the nutritional quality of overall food spending patterns in line with income (Volpe & Okrent 2012) and the range of studies that demonstrate that lower income levels tend to be associated with food intakes of poorer nutritional quality (Deshmukh-Taskar et al. 2007; Giskes et al. 2002a; Giskes et al. 2002b; Guenther et al. 2008; Lallukka et al. 2007; Smith & Baghurst 1992). However, the findings at this broad level do reflect the findings from a similar Canadian study which also showed no differences between low-income and other households in the allocation of proportional expenditure to an equivalent aggregate group of unhealthy foods (Kirkpatrick & Tarasuk 2003).
Importantly, the findings of the current study demonstrate that the relationship between income and patterns of food expenditure on healthy and unhealthy foods is complex when examined at the food sub-group level. The findings at the sub-group level reveal more of a mixed picture, which is discussed below.

**Income-related patterns in specific healthy and unhealthy food sub-groups**

There was no uniform pattern in ways that households from different income groups allocated their grocery expenditure between healthy and unhealthy food sub-groups. In comparison to those in the high-income quintiles, households in the low-income quintiles allocated significantly more of their grocery budget to the healthy food sub-groups of breads and cereals, core dairy foods and potatoes but allocated a significantly smaller proportion to the healthy food sub-group of fruit. They also used proportionally more of their grocery expenditure to purchase foods from the unhealthy food sub-groups of processed meats and fats and oils, but less to non-core drinks when compared to higher-income households. These results are consistent with other studies of purchasing patterns indicating that for some, but certainly not all food sub-groups, there is evidence that purchases of low-income groups are less consistent with healthy diets when compared to those of high-income groups (James et al. 1997; Kirkpatrick & Tarasuk 2003; Ricciuto & Tarasuk 2007; Ricciuto et al. 2006; Smith et al. 2013; Stewart et al. 2003).

**Income-related patterns in specific healthy food sub-groups**

The negative relationship between income and proportional expenditure seen in the total healthy foods sub-group was reflected in the three healthy food sub-groups of breads and cereals, core dairy foods and potatoes. For the sub-groups of breads and cereals and core dairy foods these negative income-related trends are consistent with those seen in the Canadian analysis of food expenditure, which categorised these foods in a similar way (Kirkpatrick & Tarasuk 2003).

It is important to note that while there is clearly a relationship between income and the proportional allocation of grocery expenditure to these sub-groups, the limitations of the ABS coding around these two food groups mean there is a level of uncertainty present in these results. Both of these food sub-groups were broadly classified as healthy food sub-groups, but each contained expenditure items that varied in nutritional quality. For example, the breads and cereals food groups contained both wholegrain and regular white breads, and breakfast cereals with high
levels of fibre and low levels of sugar, as well as those with high levels of sugar and low levels of fibre. Similarly, the core dairy foods group contained full-fat and low fat options. Other studies (Binkley & Golub 2011; Miura & Giskes 2010; Turrell & Kavanagh 2006) suggest that higher-income groups are more likely to purchase options in these categories which more closely reflect nutritional guidelines, but this level of detail can’t be ascertained from the current quantitative analysis.

Uncertainty of the nutritional value of purchased items was not an issue for the analysis of the potatoes sub-group. The results here clearly indicated that households in lower-income quintiles allocated more of their grocery expenditure to potatoes than did those in higher-income quintiles. However, in interpreting the strength of this statistical trend it is important to take into account the low level of grocery expenditure allocated to this sub-group (see Appendix B). In the main sample, the lowest-income quintile allocated only 1.4% of grocery expenditure to potatoes (which equated to $0.95), and the highest quintile allocated just 1.0% of theirs ($1.59). These low levels of expenditure mean that small differences in expenditure would equate to relatively large proportional changes, which may explain in part the strong trend seen across the income quintiles for this sub-group. Despite this, the results here do demonstrate a clear relationship between household income and patterns of expenditure on potatoes.

The sub-group of fruit was another for which the nutritional value of the foods being purchased was well defined. Fruit was the only healthy sub-group that showed a positive relationship between expenditure and income, with higher-income quintiles spending proportionally more of their grocery expenditure on this food sub-group than lower-income quintiles. The results suggest that the particularly high levels of proportional expenditure allocated to fruit by the highest-income quintile may account for much of the trend across all quintiles (see Figure 4.2 p. 83 or Appendix C), which reflects the findings of a recent study of fruit and vegetable consumption in the USA (Middaugh et al. 2012). In the absence of any information about either the prices or quantities of fruits purchased by households, it is not possible to ascertain whether the positive relationship seen here indicates that high income households are simply buying more fruit, buying more expensive fruits, or both. Other evidence suggests that it may indeed be both. A recent analysis of the 2007-08 National Health Survey shows that Australians who live in the least socio-economically disadvantaged areas consume more fruit than those who live in the most deprived areas (ABS 2012) while the earlier Brisbane Food Study (BFS)
(Turrell et al. 2002) demonstrated that high-income participants purchased a wider variety of fruit, more regularly, than those with lower incomes. Higher-income households in America have also been observed to pay higher prices per ounce of fruits and vegetables than lower-income households (French et al. 2010), and the substantial variation in the prices per serving of different types of fruit (Stewart et al. 2011a) is one potential avenue which may lead to higher levels of expenditure.

Given that fruits and vegetables are nutritionally similar, the contrasting income-related trends in expenditure allocated to the sub-groups of fruit and vegetables were both interesting and somewhat unexpected. The analysis of the proportional expenditure to the sub-group ‘all vegetables (incl potatoes)’ showed a negative relationship with income, but when potatoes were removed, there was no trend present in the sub-group of ‘other vegetables (excl potatoes)’. As with fruit, the coding of food expenditure items did not pose any issues for the sub-groups of ‘all vegetables’, or ‘other vegetables’ as these sub-groups clearly contained foods that were of high nutritional quality. The income-related patterns seen in vegetables expenditure here only partially support the findings of the BFS (Turrell et al. 2002) outlined above. While significant income-related differences were evident in the BFS for both fruits and vegetables, the magnitude of difference did vary between these two foods, with low-income respondents being 2.3 times as likely to be ‘low-compliers’ with the nutritional recommendations for vegetable consumption than high-income respondents, but 4.5 times as likely to be ‘low compliers’ with recommendations for fruit. Although level of income is not directly comparable with level of neighbourhood deprivation, the present findings align more closely with the those of the National Health Survey (ABS 2012) which showed no differences in levels of vegetable consumption between people living in more- and less- deprived areas. The reasons underlying different patterns in that ways that households of varying income levels allocate their grocery expenditure to the sub-groups of fruit and vegetables are not clear from the present analysis. However, given the level of detail within the HES dataset around these food groups (15 ABS expenditure item codes available for different fruits, and 15 for vegetables), further insights may be gained in future studies which could examine the relationship between the variety of fruits and vegetables purchased by households with different levels of income. In addition, the findings from the qualitative phase of this study provide some possible explanations for this unexpected difference in expenditure patterns for fruits and vegetables (see Chapter 9).
The final healthy food sub-group of meats and alternatives showed no relationship between the allocation of proportional expenditure and income. This finding again reflects those for the equivalent food group in the Canadian analysis of income and food expenditure patterns (Kirkpatrick & Tarasuk 2003). In the present analysis, meat accounted for an average of 18.9% of grocery expenditure, which was easily the highest of all food sub-groups and is consistent with other studies that have examined the price of a healthy diet in Australia (see for example Tsang et al.(2007)). Like fruits and vegetables, it is possible that there is significant variation in the prices of different items within the meats and alternative sub-group, depending on the type of meat and the quality or quantities purchased, meaning households may be selective in their choices according to their budget. Again, the lack of data around prices and quantities of meats purchased mean it is impossible to ascertain how much meat was purchased by households from the different income quintiles from the analysis of income-related expenditure patterns for this sub-group alone. However, the finding that households in lower-income quintiles allocated more expenditure to processed meats (discussed further in the next section), suggests that there may have been some substitution between these two food sub-groups in lower-income households. The findings of the qualitative phase of this study are also useful in providing some further understandings of how and why meat-purchasing patterns might vary between high- and low-income households, which is discussed further in Chapter 9.

**Income-related patterns in specific unhealthy food sub-groups**

Only three of the unhealthy food sub-groups showed statistically significant trends across the income quintiles. The two sub-groups of non-core meats and fats and oils demonstrated strong negative trends across the income quintiles. Non-core drinks showed a positive trend.

The negative income-related trends for the two sub-groups of non-core meats and fats and oils were very strong, but as with potatoes above, these findings should be interpreted with some caution given the relatively low levels of proportional grocery expenditure allocated to these groups (2% for fats and oils, 3.5% for non-core meats in the main sample, see Table 4.8, p. 80). The graphs of the results (see Figure 4.3, p. 86) show that patterns of expenditure across the income quintiles for these two grocery food sub-groups are not uniform. Rather than decreasing steadily across all income quintiles, the results suggest that the significant statistical trend
seen for the non-core meats sub-group may be due to the higher levels of proportional spending in the two lowest-income quintiles. Similarly, the significant income-related trend for the fats and oils sub-group is likely to be mainly due to lower proportional spending by the highest-income quintile. This suggests that there may be a greater emphasis on the purchasing of non-core meats in the lowest two quintiles, and a reduced emphasis on the purchasing of fats and oils by the highest quintile rather than more even income-related trends for these foods.

The finding of a strong positive association between income and the proportion of expenditure allocated to non-core drinks in the main sample was not expected, as a number of prior studies (Hamasha et al. 2006; Nelson et al. 2007; Scully et al. 2007) have shown relatively high intakes of these products in low-income groups. While high-income households do account for the largest proportion of Australian soft drink sales (Levy & Tapsel 2007), the implications of the findings for this food sub-group need to be interpreted with caution as the income-related trend is likely to be due to the particularly low allocation of expenditure to non-core drinks by the lowest-income quintile, a finding which was not seen in the primary school sub-sample (see Figure 4.3 p. 86). The reasons for particularly low levels of allocation to non-core drinks by the lowest-income quintile in the main sample are not clear from the current quantitative analysis.

No other unhealthy grocery food sub-groups displayed income-related trends, however there were some interesting findings related to the patterns of expenditure in some specific quintiles, particular those in the fourth quintile. Households in the fourth-income quintile were the only group who allocated significantly more grocery expenditure to the sub-group of confectionary and desserts than the highest quintile. They also had the highest proportional allocation of expenditure to cakes and biscuits, although this difference was not statistically significant (see Figure 4.3 p. 86 or Appendix C). Together with households in the third quintile, those in the fourth quintile also allocated significantly more proportional expenditure to the savoury snacks sub-group than the highest quintile. These findings of higher expenditure allocation to several unhealthy sub-groups by households in the fourth income quintile are reflected in the findings for the total unhealthy foods sub-group, where again, they are the only group to show significant higher levels of proportional expenditure in comparison to the highest quintile. This quantitative data analysis alone cannot provide an explanation for why one group of households allocated their grocery expenditure differently to other income groups in this way, but the discussion
of the findings from both phases of this study located in Chapter 9 proposes some possible reasons underlying this rather unexpected finding.

8.2.2 Comparison of findings- main sample versus primary school sub-sample

In general, the results for most food sub-groups in the primary school sub-sample reflected those seen in the main sample (see Figures 4.2 and 4.3, p. 83 and 86 respectively). However, the much larger confidence intervals around the adjusted mean proportions of expenditure meant that only the trend for expenditure on fats and oils remained statistically significant in primary school households. The much smaller size of this sub-sample, which comprised of just over 1200 households compared to nearly 7000 households in the main sample, accounts for the differences in the confidence intervals. The only other notable difference between the main sample and the primary school sub-sample was in marked difference in the findings for non-core drinks in the lowest quintile, as discussed above.

To my knowledge, there have been no previous studies that have compared expenditure patterns on a range of healthy and unhealthy foods between all household types and those that contain young children. However, a recent study of food purchasing patterns showed that households with children were more likely to purchase less healthy options in specific grocery categories, such as breakfast cereals (Binkley & Golub 2011). The findings from studies examining differences in food and nutrient consumption patterns in adults from households with and without children appear to be mixed, with one study showing that adults from American households with children ate many unhealthy foods, such as ice-cream, processed meats, pizzas and salty snacks, more frequently than adults who did not have children (Laroche et al. 2007) while another has shown that for Finnish women, but not men, having young children was associated with nutrient intakes being closer to the dietary guidelines (Roos et al. 1998).

The results from the current study suggest that there are few differences in the income-related expenditure patterns for healthy and unhealthy foods between all household types and those that contain primary school-aged children. While these results do not reflect differences seen in previous studies, this might be explained by the level of data available within the HES which in comparison to other studies, does not allow for the detailed examination of issues such as the purchase of regular versus healthy options for specific grocery items (Binkley & Golub 2011), nutrient
intakes (Roos et al. 1998) or consumption of specific food items (Laroche et al. 2007).

Importantly, the congruence of findings between the expenditure patterns for high- and low-income households the main sample of all household types and those in the primary school sub-sample, suggest that the relationship between income and purchasing patterns of healthy and unhealthy foods operate in similar ways in these two groups. Therefore, it is reasonable to compare the findings from the qualitative study, drawn from a sample of mothers from households that contained primary school-aged children, with the main findings from this quantitative phase in an attempt to provide some possible mixed method explanations for the income-related patterns of expenditure seen.

8.2.3 Limitations of the quantitative phase

In interpreting the findings of this quantitative phase of the current study, it is important to acknowledge the limitations associated with this analysis of HES data. Although the HES dataset offered an excellent way to access detailed information about the food expenditure patterns from a large, nationally representative sample, using this secondary data source meant forgoing control over the conditions and quality of data that were collected (Vartanian 2011). The way the ABS categorises food expenditure items is not perfectly suited to an analysis of food spending according to nutritional value. This issue was dealt with by careful examination of the detailed codes to ensure that each code was allocated as best as possible between healthy, unhealthy and mixed food sub-groups. Unlike similar expenditure surveys in other countries, the HES does not contain information about the nutritional composition (e.g., full-fat or low-fat milk) or quantity of food items purchased by households (Kirkpatrick & Tarasuk 2003; Ricciuto et al. 2006; Trichopoulou et al. 2002). Together with an absence of price data, this means the conclusions here are limited to the level of expenditure on certain foods, rather than a more detailed understanding of which households buy how much of specific food items. Additionally, as this study like other similar analyses, explores patterns of expenditure not consumption, I could not account for other factors around the way food is used and distributed after purchase, such as intra-household food allocation, food wastage, food that is given away or received without payment or foods that may be eaten but not purchased such as home-grown foods. Finally, as the HES measured food purchases through the use of a personal diary over a two week period, the data
may not exactly reflect food purchases across an longer time periods due to temporal and inventory effects (Ricciuto et al. 2006).

Some other limitations are associated with particular decisions made regarding the analysis of the HES data. I elected to focus on grocery foods only, rather than all foods and beverages purchased by households, meaning the current analysis does not portray a complete picture of household food spending. As explained in Chapter 4, this decision was made due to the lack of detail around the types of foods that were included in the ABS expenditure codes for food away from home. The descriptive analysis of the HES data indicated that households in higher-income quintiles allocated greater levels of expenditure to eating out, which is in agreement with the findings of other Australian studies (Mohr et al. 2007; Turrell & Giskes 2008). However, other Australian studies suggest that low-income groups are more likely than high-income groups to purchase foods from less healthy sources such as ‘fast food’ chains (Inglis et al. 2005; Thornton et al. 2011).

In this study, I used level of household income as an indicator of a household’s financial situation. While income is a common indicator of socio-economic status in epidemiological research, it does not always give an accurate picture of the financial resources available within a household. For example, households of similar income levels may vary greatly in terms of their accumulated assets and wealth, and current household income does not take into consideration a person’s income over their life course (Lynch & Kaplan 2000). Finally, the findings of the current quantitative study are not generalisable to the Australian population as survey weights were not applied in the current analysis. I elected not to use the survey weights made available in the HES dataset, as they are calculated using some, but not all, of the demographic details of households that were included as covariates in the binomial logit analyses (ABS 2006c). Therefore, I judged that the risk of over-adjustment in applying survey weights outweighed the reduction in generalisability of the findings that result if I did not apply the survey weights. Therefore, we cannot assume that the relationships between income and patterns of household expenditure allocated to healthy and unhealthy foods found in the HES exactly represent those that exist in the broader population.
8.2.4 Summary, strengths and contributions of the quantitative phase

The current quantitative analysis of the Australian HES 2003-04 dataset has demonstrated that the relationship between income and food purchasing patterns of healthy and unhealthy food groups are complex, with no clear relationship evident between income and the allocation of household expenditure to healthy over unhealthy food groups. Like other studies in this field, the current findings suggest that while the economic resources available to households do seem to have an impact on the nutritional value of foods that are purchased, this is not the only factor that influences the types of food selected. The patterns of income-related expenditure allocated to healthy and unhealthy foods did not vary significantly between all households and those that contained primary school-aged children.

The current analysis drew on a large nationally representative dataset, and examined the patterns of expenditure between households of varying income levels from a nutritional perspective. The use of a household approach to examining food purchasing patterns is a key strength of this study, as many decisions about food are made at the household rather than individual level.

To my knowledge, this is the first time a detailed analysis of household income-related expenditure patterns in terms of both overall and individual healthy and unhealthy food groups has been undertaken using Australian data. Therefore, the current study adds an important perspective on household purchase patterns to the Australian public health nutrition literature. In addition, this study also examined income-related patterns of expenditure on healthy and unhealthy food at a more detailed level than previous studies conducted elsewhere.

The present findings highlight the importance of analysing income-related food expenditure patterns at a detailed sub-group level. As suggested above, looking in even more depth at grocery purchasing patterns (such as at the levels of expenditure on specific types of fruits and vegetables) could be employed in future studies to improve our understandings of income-related food purchasing patterns further. Most importantly, the present study demonstrates that income-related purchasing patterns are not consistent across all sub-groups within healthy and unhealthy grocery food categories. While it is beyond the scope of this HES analysis to explain why high- and low-income households allocate their grocery expenditure to healthy and unhealthy foods in specific ways, some of potential mechanisms underlying the
complexities seen in these patterns are further explored using the findings from the qualitative phase in the mixed methods discussion in presented in Chapter 9.

8.3 Qualitative study discussion

The qualitative phase of this mixed methods study sought to gain an in-depth understanding of how a diverse group of mothers perceived value in the foods they encountered in their day-to-day shopping experiences. It focussed particularly on the roles that considerations of cost and nutrition played in the formation of these perceptions. By exploring the ways in which consumers from diverse socio-economic backgrounds perceived value in healthy and unhealthy foods, this phase of the study worked toward the overall purpose of the study which was to improve our understanding of the mechanisms which produce and reproduce socio-economic inequalities in the nutritional value of food choices. The following two objectives were set for the qualitative phase of this mixed methods study:

**Objective 2a:** To describe how mothers of primary school-aged children perceive value when shopping for food items, and how considerations of monetary cost and nutritional value feed into these perceptions.

**Objective 2b:** To compare and contrast the ways in which mothers of primary school-aged children from high- and low-income backgrounds perceive value in food items, particularly in regards to the considerations of monetary cost and nutritional value.

I set out to fulfil these objectives by conducting qualitative interviews with 22 mothers who lived in high- and low-income areas of Melbourne. As described in Chapters 5 and 7, during the secondary data analysis process, it became clear that the concept of income in isolation could not be used to understand all aspects of social patterns seen in the ways that different participants perceived value around healthy and unhealthy foods. Thus, the second objective was changed, mid-study, to instead compare and contrast how mothers with different levels of resources (financial, cultural and social) perceived value in the foods they bought. The second research objective for the qualitative phase was therefore revised as follows:

**Objective 2b (revised):** To compare and contrast the ways in which mothers of primary school-aged children with different levels of financial, social and cultural resources perceive value in food items, particularly in regards to the considerations of monetary cost and nutritional value.
Detailed findings of the descriptive and discourse analyses of the interview data were presented in Chapters 6 and 7 respectively. Below, the main findings from the qualitative phase are discussed in light of each of these two research objectives in turn. In doing so, I seek to demonstrate how the findings from this qualitative study fit within the food choice and public health literatures and the specific contribution that this qualitative work makes towards helping to understand how both economic and socio-cultural factors influence consumers’ perceptions of healthy and unhealthy food items, and therefore their tendencies to purchase and consume diets of varying nutritional quality.

8.3.1 How did participants perceive value in healthy and unhealthy foods?

The findings from the descriptive analysis of the qualitative data demonstrated how participants formed their perceptions of value around healthy and unhealthy foods in three different contexts: perceptions of food items; perceptions of food practices; and perceptions of food responsibilities. Considerations of monetary cost and nutritional value of foods played a substantial role in the construction of perceptions of value around food in each of these three contexts. As described in Chapter 6, these contexts were inter-related in that the ideas around food items fed into practices, and the considerations around food practices in turn fed into those around food responsibilities.

When describing their perceptions of food items, participants described a range of objective attributes they associated with the different food items they encountered in their usual shopping environments. Common attributes of foods that were discussed included the price of an item, the quality (which itself was constructed using a wide range criteria), its health value and other features including the quantity of product on offer, the packaging and ethical considerations.

Participants’ perceptions of their food practices were revealed as they related their objective perceptions of foods back to their own family contexts, explaining how and why different foods fitted within their everyday practices of shopping for, and managing food. These practical aspects of participants’ broad food management practices, such as negotiating family preferences, managing the flow of food through the households and cooking and preparing foods for the family, were integral to their perceptions of value around food. This demonstrated that participants’ perceptions of value were firmly rooted in the rich socio-cultural contexts of family life.
When the mothers interviewed spoke about their food shopping practices, the notion of getting a ‘good deal’ was particularly strong. This idea reflects the notion of consumer value (Zeithaml 1988) which informed the current study. Participants in the current study could be understood to weigh up their perceptions of what they paid with what they got as they made their food purchasing decisions. Monetary cost was always considered, at least to some extent, in this equation and the nutritional or health value of a food item was often, but not always, taken into consideration. The descriptive findings here importantly demonstrate that participants prioritised the attributes of food products in very different ways, which concurs with both Zeithaml’s (1998) portrayal of consumer value as a highly idiosyncratic concept and Furst et al’s (1996) model of food choice.

The findings in these first two contexts, that participants selected foods for their families based on their assessment of the attributes of food items and how they would fit with the wants and needs of their families, reflect those of other models and studies of food choice in family contexts in the public health literature (Furst et al. 1996; Glanz et al. 1998; Maubach et al. 2009; Wiig & Smith 2009). For example, a dynamic process of ‘value negotiations’ in which considerations such as cost, convenience, quality and managing relationships is central in the model of food choice developed by Furst and his colleagues (1996). Similarly, a process of weighing up taste, cost, convenience, nutrition and weight concerns when selecting foods is described in Glanz and colleagues’ (1998) more simple, deductively derived model of food choice, which is highly cited in the public health nutrition literature.

In the final context, participants described their perceptions of food items in terms of the responsibilities they felt were associated with their role as the main food purchaser within their family. Here, the findings revealed that participants considered not only the practical aspects of their food decisions, but also the moral consequences of them. Participants described the ways in which they considered the broader food needs of their families when making food choices. These broader, more abstract needs were somewhat distinct from more immediate family wants and needs expressed as food preferences. Broader concerns around family food included providing an adequate quantity of acceptable foods in a general sense, and ensuring that the foods provided were largely enjoyed by all family members and were generally healthy. The findings in this context also revealed that for some participants, perceptions of the value of different foods were also shaped by the other, non-food related family needs or activities (such as children’s sport or family
holidays), which also demanded the allocation of the families’ resources in terms of
time and money.

The findings that perceptions of value around foods involve both practical and
moral considerations are again supported by previous work in this area. Individuals
‘ideals’ or ‘expectations, standards, hopes and beliefs’ are noted to be a highly
pervasive influence on food choices in Furst and colleagues’ (1996) model of food
choice. The combination of both practical and moral considerations evident in
participants’ perceptions of value around foods also reflect all three of the
components of value outlined by Warde (1997) which informed the design of this
qualitative phase. Not only did we see that participants weighed up the cost of food
items (exchange value) with their functional attributes (use value) but they also paid
distinct attention to how different food selections reflected who they were, and/or
who they wanted to be (identity value). The link evident here, between food choices,
identity and moral ideals, is also supported by some qualitative work focussing
specifically on the role of identity in food choice. Bisogni and colleagues’ (2002)
have demonstrated how the (multiple) identities that individuals construct around
food can reveal how people both judge themselves and feel judged by others, and
that these identities not only form as a result of food choices, but also influence
future food choices.

In summary, this descriptive qualitative analysis revealed that mothers perceived
value around healthy and unhealthy foods in both practical and moral terms.
Participants weighed up a wide range of factors related to: the specific food items
they might purchase; how these food items fitted in with their own personal and
family contexts; and their notions of responsibility around providing foods for their
family. This weighing-up process was undertaken in highly idiosyncratic ways, but
considerations of monetary cost and nutritional value were important factors that
were taken into consideration to varying degrees by all participants at both practical
and moral levels.

By highlighting how perceptions of value around healthy and unhealthy foods
are strongly linked to ideas of responsibility and the moral implications of food
choices, this descriptive analysis invited the move towards understanding perceptions
of value around food as the products of self-regulatory, or self-governing practices.
In this way, the descriptive findings gave rise to the secondary, discourse analysis of
the data. The discourse analysis was used to examine, in more depth, the different
ways in which participants constructed their notions of value and themselves through
their discussion of their food shopping practices. The findings from the discourse analysis are discussed in the following sub-section in light of the second, revised objective of this qualitative research phase.

8.3.2 Similarities and differences in perceptions of value around foods

As described above, the current study is not the first to have highlighted the ways in which moral considerations impact on food choices (Burns et al. 2013; Furst et al. 1996; Glanz et al. 1998; Hammond & Chapman 2008; Sobal & Bisogni 2009). However, through the secondary discourse analysis of the interview data, the current study makes a significant contribution to public health nutrition literature by examining the ways in which participants with different levels of financial, social and cultural resources regulate their food purchasing practices by drawing on a range of discourses that circulate in the field of food choice. Comparing and contrasting the ways in which different participants constructed their perceptions of value around foods, and themselves as food choosing subjects (‘good shoppers’, ‘good mothers’ and ‘good citizens’) revealed an important mechanism that may contribute to the production and reproduction of socio-economic inequalities in food choices.

The discourse analysis took a governmentality approach, and began by identifying the main discourses that participants drew on in order to construct themselves as good food choosing subjects. As detailed in Chapter 7, the current analysis focussed on the discourses of quality and thrift, with the more tightly bounded discourses around nutrition and the cost of food items being of particular interest. While not of central importance to the research objectives, this analysis also showed that discourses around caring/nurturing were also regularly drawn on by participants in their constructions of themselves as good mothers through their food purchasing practices. In taking a governmentality approach, the discourses identified by this analysis were viewed as socially constructed forms of knowledge (Bacchi 2009). That is, rather than being ‘the truth’, discourses are understood as certain versions or representations of the truth. The historical roots of these discourses were therefore briefly traced. The nutrition discourse was identified as originating from expert discourses around scientific and medical understandings of food and its effects on the human body. The thrift/cost discourse originated from expert advice provided by home economists to citizens about how to manage household finances efficiently, and how to practice restraint in the selection, purchase and use of different foods.
By examining how this diverse group of mothers drew on the discourses of quality and thrift to construct their perceptions of value around foods, this discourse analysis revealed how participants were actively constructing and reinventing themselves through their everyday food purchasing and management practices (Petersen 2003). The mothers interviewed could all be seen to construct themselves, and their perceptions of value around foods, by drawing on the discourses of quality and thrift. Through a governmentality lens, we can therefore view the participants in this study as ‘willing individuals’ actively engaging with the powers that govern them and by which they govern themselves (Garland 1997). The findings thus demonstrate how all participants, regardless of their level of resources, aligned their food purchasing choices with the various objectives of governing authorities and were therefore seeking to fulfil their obligations as modern neo-liberal subjects (Petersen 2003).

Just as in any field, the discourses around food choice revealed by this analysis did not exist in a vacuum, but rather could be seen to be “in constant conflict with other discourses and other social practices which inform them over questions of truth and authority” (Mills 2004, p. 17). All mothers had to negotiate competing discourses to make many of their everyday food choices, as the multiple discourses that circulated around food presented competing moral understandings of which foods offered ‘good value’. As seen in other studies (Furst et al. 1996), mothers often described established routines or procedures for selecting particular food items, so the negotiation of different discourses did not necessarily take place each and every time they had to make a food purchasing decision. But almost all mothers, at some point, conveyed experiencing some form of moral dilemma when making specific food choices for their families. For example, Wendy recounted that she had recently bought a particular pre-packaged dessert because it was on special, and bought some cream to go with it (see p. 137). In making this choice, Wendy drew primarily on the discourse of cost to construct these purchases as ‘good value’, but also drew on the discourse of nurturing when she noted that her children found this food item to be a “very exciting” addition to the family’s groceries for the week. However, Wendy’s discomfort was evident in recounting this purchase to me. She went on to describe the dessert as “disgusting” and pointed out that cream was not a normal purchase she would make. It seemed her actions in this case did not align with her own perception of ‘good food’ according to the discourse of nutrition.
The need to negotiate competing discourses when making food purchasing choices has been highlighted previously in the food choice literature (Furst et al. 1996; Sobal & Bisogni 2009). Koch (2012) recently identified the discourses of nutrition and thrift (which she terms efficiency) as being central to a group of grocery shoppers’ constructions of their food choices, noting at times how shoppers needed to choose between the two. Given that the responsibility for shopping and providing food often falls to women, previous studies have also examined how women negotiate the often contradicting positions that are opened up for them by nutritional discourses (Madden & Chamberlain 2010) and the difficulties that mothers in particular face in negotiating the competing discourses of nurturing/caring and health/overconsumption when providing food for their children (Maher et al. 2010a).

The present analysis also highlights how the multiple, and sometimes conflicting, discourses around food choice not only presented moral dilemmas for participants, but also opened up opportunities for them to be creative in how they constructed themselves as food choosing subjects. As Peterson describes:

“Individuals creatively engage with expertise, taking from encounters what they wish and interpreting information within their own lay frameworks of knowledge, according to the perceived relevance of information.” (2003, p. 197)

The participants in the current study could be seen to creatively engage with the discourses of nutrition and cost in two distinct ways. Firstly, participants creatively adapted the discourses to suit their own situations. At times, they selectively drew on some particular aspects of a discourse, which they perceived to be relevant to their own situations, while ignoring others. In doing this, they were able to construct their food choices as ‘proper’ in ways that were relevant to their own unique family contexts. Secondly, when faced with a conflict between discourses, participants tended to prioritise them. They tended to draw more heavily on one dominant discourse, which was used to guide their food purchasing choices, while giving less emphasis to the other(s). Although all participants used these two creative processes to construct themselves as food choosing subjects, participants with varying levels of resources did so by drawing on the discourses of nutrition and cost in substantially different ways.
These two ways in which the participants creatively engaged with the discourses around foods are discussed in turn below.

**Creatively adapting discourses to construct the food choosing self**

The findings of this discourse analysis demonstrated that mothers adapted the various discourses around food to suit their own needs. By using discourses in this creative manner, we can see they were ‘fashioning’ their worlds in new ways (Rose et al. 2006) in order to position themselves as ‘good’ food choosing subjects. In her seminal study of the experience of mothering in modern society, Hayes uses the analogy of “sorting the mail” (Hayes 1996, p. 71) to describe the ways in which mothers from different socio-economic backgrounds select which parts of complex modern discourses around caring for children are relevant to them, and which are not. In much the same way, mothers in the current study appeared to sift through the range of ideas suggested to them by the discourses of nutrition and cost around food choices, choosing to pay attention to some elements of each discourse while ignoring others. Therefore the findings here suggest that participants with different levels of financial, and social and cultural resources seemed to find different elements of these discourses more and less attractive.

Participants in the high-resource group appeared to be most creative with the thrift discourse. As discussed in depth in Chapter 7 (see p. 180) they adapted the notion of ‘being frugal’ in ways which suited their middle class lifestyles. They tended to shop at discount retail outlets for low cost but good quality items only, or ‘saved’ money in ways that required a large upfront investment. Taking on the discourse of cost in these creative ways has been referred to elsewhere as “opt-in frugality” (Goode 2012, p. 8) or “new thrift” (Jensen 2012, p. 3). We also saw that these high-resource participants were occasionally creative with different elements of the nutrition discourse when the need arose. For example, Ruby and Annabelle focussed on the positive health attributes of food like chocolate or homemade sweet snacks (see p. 132) positioning them as ‘natural’ or ‘wholesome’ in contrast to some processed alternatives, thus selectively downplaying the poor nutritional composition of these items.

The low-resource participants seemed to be more creative in the ways they drew on the nutritional discourse. Much like the high-resource participants, we saw that mothers in this group would often point out the positive health aspects of their food choices and disregard other, perhaps more negative nutritional
aspects. In comparison to the high-resource mothers, the low-resource participants did this more often, and tended to focus on different positive health attributes. For example, Jacqui talked about how she chose white bread for her family, even though she knew it wasn’t the “healthiest option” (see p. 187). She compensated for this by implying her selection of the thicker sliced ‘toast’ loaf was ‘healthy’ in that it was a ‘good’ filling option as it made a “nice big square sandwich”. We also saw Tamara pointing out the ‘good’ nutritional aspects of some items she bought for her children (see p. 188), which perhaps reflected some of the marketing claims made by the manufacturers of the products in question. She constructed chocolate as a ‘good’ school snack for her boys because of the “energy” it contained, and similarly focussed on the high calcium content of the chocolate flavoured yoghurt snacks they liked to eat.

The different emphasis placed here on the discourses of nutrition and cost by participants with different levels of resources is likely to be reflective of the broader ways in which they prioritised the different discourses in their constructions of themselves, and their constructions of notions of value around foods. This process of prioritising the discourse of cost over the discourse of nutrition, or vice versa, was a key finding of this qualitative analysis and is explored in more depth below.

**Prioritising discourses to construct the food choosing self**

While there were many nuances in the ways that individual participants constructed themselves around food, there were some broad patterns evident in the ways that mothers with different levels of financial, social and cultural resources prioritised the discourses of nutrition and cost to construct themselves, and their perceptions of value around food. In Chapter 7 it was explained how the high- and low-resource groups of participants were in fact identified due to the distinctly different ways in which they prioritised the discourses of nutrition and cost/health when constructing their perceptions of value around food.

The high-resource group, who had high levels of financial, cultural and social resources, drew strongly the discourses of quality, particularly that of nutrition, and gave only limited attention to the discourse of thrift when constructing themselves as food choosing subjects. For example, Annabelle saw fresh fruit as a food that offered excellent value (see p. 193). She drew primarily on the discourse on nutrition to construct this perception of fruit, focusing the
form of fruit as a nutritious food. She described using multiple strategies to encourage the consumption and enjoyment of fruit by her children, and thereby constructed herself as a ‘good shopper’ and ‘good mother’ who purchased large quantities of fresh fruit and ensured there was always a range of inviting, high quality fruit items available to her family. This dominant status given to the discourse of quality in these mothers’ constructions of themselves as food choosing subjects are well supported by the findings of a recent study investigating the food and eating practices of middle class Australian ‘foodies’ (food enthusiasts) (de Solier 2013).

In contrast, the low-resource group, who had low levels of financial, cultural and social resources, drew strongly and consistently on the discourse of thrift when constructing themselves as food choosing subjects. These low-resource mothers did also draw on discourses of quality, but usually the discourse of nutrition was only of minor importance in their constructions of ‘proper’ food shopping practices. For example, Tamara regarded fresh fruit as a poor choice for her family (see p. 187). She drew primarily on the discourse of thrift to construct her perceptions of value around fruit, describing how her children would not willingly chose to eat fresh fruit as a snack, which meant there was a high risk it would be thrown out rather than eaten. In this way, she constructed herself as a ‘good shopper’ by focussing on the functional aspects of fruit (or lack thereof) as a food, and electing to purchase only small quantities of fresh fruit, in order to avoid wastage and spend her money ‘wisely’ by prioritising other foods.

These findings of patterns in the ways that high-resource, ‘middle class’, and low-resource, ‘working class’, participants constructed their perceptions of value around food are in line with the classed patterns of taste around food practices that have been reported previously. The ways in which mothers with high levels of resources paid close attention to the form of the food they bought in terms of quality and nutrition, and how those with low resources, focussed on food’s functional role are reflected in both Bourdieu’s own work (Bourdieu 1984) and in more recent empirical research examining class based family food practices in both Australia (Coveney 2007) and the UK (Wills et al. 2011). Several of the other key differences in the ways these ‘middle class’ and ‘working class’ participants constructed meanings around food, such as the focus on health in terms of a long-term versus short-term outlook, and the intergenerational nature of both groups’ understandings around food, also support the findings of the UK
based study (Wills et al. 2011).

However, by interrogating the specific ways in which mother drew on the discourses available to them in their everyday food worlds to regulate their food purchasing practices, the current analysis extends the work of previous comparative studies of class-based food practices. No previous studies, to my knowledge, have investigated class-based patterns in the ways that consumers engage with the various discourses that circulate around healthy and unhealthy food choices, or the ways in which consumers from different socio-economic backgrounds regulate their food purchasing choices. In addition, by identifying a broad spectrum of ways of constructing the self via food practices, the current analysis provides a more nuanced understanding of the possible mechanisms which may underpin socio-economic inequalities in food choice than previous studies.

In an attempt to explore the ways in which participants outside the distinct high-resource and low-resource groups perceived value in the foods they purchased, the current analysis honed in on how two particular participants with mixed levels of resources constructed themselves as food choosing subjects. These mixed-resource participants, by definition, do not align well with the traditional dichotomy of middle class and working class social groups that are often explored in the food choice literature. However, understanding the social structure in this way aligns well with a recent multi-dimensional model of social class developed in the UK (Savage et al. 2013), and highlights some of the more nuanced aspects of the social spectrum. Anita and Deborah were not the only two participants with mixed levels of resources identified in the participant group, but examining these two cases in depth provided a useful insight into the diversity and complexity of the ways in which participants constructed their perceptions of value.

Anita, who had high levels of economic resources, but relatively low levels of social and cultural resources, constructed herself as a food choosing subject in ways that were both similar and different to those of participants with high levels of all resources. She too placed a strong emphasis on quality when purchasing foods and paid only moderate attention to moral ideas around thrift. However, despite prioritising the discourse of quality, Anita did not draw on the discourse of nutrition in the same ways that the participants in the high-resource group did. While she frequently talked about purchasing a wide range of healthy options for
herself and her family, she lacked the very clear focus on nutritional principles that the high-resource mothers demonstrated through their frequent discussion of regulating their own, and their families’ consumption of unhealthy foods.

Deborah on the other hand, had low levels of economic resources, but relatively high levels of social and cultural resources. Again, she constructed herself as a food choosing subject in similar but different ways to the participants with low levels of all resources. She discussed having no option but to constantly pay attention to issues of cost, and therefore just like the low-resource participants, she tightly regulated her food purchasing practices by emphasising the importance of the discourse of thrift to responsibly manage the families’ household budget. At the same time however, much like the high-resource mothers, she was very conscious of the quality of the foods she provided for her family and drew strongly on the discourse of nutrition, wherever possible, to construct her notions of foods she felt to be of best value for her family.

Given the moral imperatives inherent in the discourses of nutrition and cost, we can understand this process of prioritising the discourses which guide food purchasing decisions as process of moral prioritisation. The findings from the high-, low- and mixed-resource participants therefore tentatively suggest that the different levels of resources that participants had at their disposal shaped not only which practical considerations were important for their food purchasing decisions, but also which moral imperatives were most salient. Specifically, the findings from this discourse analysis suggest that individuals with low levels of economic resources may be more strongly drawn to the moral discourses of thrift that circulate around food choices, and use them to construct themselves as ‘proper’ food choosing subjects, irrespective of the levels of social and cultural capital they have at their disposal. In addition, the current analysis suggests that individuals with high levels of social and cultural resources may find the nutritional discourse around food compelling, and use this to construct themselves as food choosing subjects, whether they have high or low levels of economic resources. For a mixed-resource participant, such as Deborah, with low levels of economic resources, but high levels of social and cultural resources, the discourses nutrition and cost may therefore carry substantial moral weight in the construction of ‘good value’ foods. Indeed, Deborah stood out from the other participants in the way that she was constantly striving to construct herself as a ‘good’ food choosing subject by intensely regulating her food purchasing
patterns on both these moral fronts.

This process of moral prioritisation, and the ways in which it appears to be associated with different levels of resources, can therefore be seen one mechanism which may underpin socio-economic inequalities in the nutritional value of food choices more broadly. While previous studies have identified cost as a particularly important practical issue for groups with low levels of financial resources when selecting foods (Inglis et al. 2005; Maubach et al. 2009; Steenhuis et al. 2011), the current discourse analysis adds to these findings by demonstrating how there may not only be practical, but also moral dimensions to the ways in which different social groups prioritise notions of cost and nutrition.

8.3.3 Limitations of the qualitative phase

The qualitative phase of this mixed methods study was a relatively small exploratory study. As such, there are certain limitations that must be acknowledged.

The interview data was gathered from a small purposive sample of relatively homogenous participants. While the shared characteristics of being the main food purchaser from a fairly ‘typical’ Australian two-parent family with at least one primary school-aged child, and having male partners in full-time work provided a strong foundation from which to make comparisons between participants from different socio-economic backgrounds, it also limits the applicability of these findings to other groups of consumers (such as single mothers, the unemployed, elderly populations or individuals from different countries or cultures).

In addition, all participants in the current study volunteered to be interviewed, which demonstrates a certain level of confidence, and willingness to disclose details of their everyday lives. The views of individuals who would not volunteer for such a study could potentially yield different results. Indeed, almost all participants who were interviewed appeared to be highly engaged and discussed their food practices in an open and frank manner. It is however possible that some participants may not have accurately reported all details of their food purchasing practices, either unintentionally, or because they sensed that some aspects of their usual practices may be judged to be socially unacceptable in the context of the interview. The technique of using photographs of a range different grocery items to elicit perceptions of food and identity may have gone some way to minimise this potential issue, by shifting
the discussion from participants’ own food shopping practices to their perceptions of
the food shopping practices of others.

As in all qualitative research, researcher/participant relationships that were
formed during the interview process would have affected the data that was gathered.
Given that this was a comparative class-based study and I am from a middle-class
background, another limitation to note is the differences in the researcher/participant
relationships that may have developed with the middle class participants, compared
to the working class participants. For example, compared to most of the participants
from Area A, many of the participants from Area B seemed to have a clearer sense
of, and be more at ease with, my role as a researcher from a university. Many
participants from Area B had attended university themselves in the past, and several
mentioned that they knew of friends or family members who had studied or worked
at my university. Given their familiarity with the university system, it is likely that
these participants would have been more aware of my affiliation with the School of
Exercise and Nutrition, that was noted in the written participant information,
compared to those participants who were less familiar with universities. These subtle
differences in the researcher/participant relationships may have had some impact on
the ways in which participants presented themselves to me. For example, some of the
middle class participants may have been more inclined than working class
participants to present themselves to me as ‘well educated’ or 'in the know’ about
food and health during the interview.

Due to the inductive nature of this study, I did not plan to undertake a discourse
analysis of the interview data. Had I known that I would draw on the concepts of
governmentality and taste/habitus in the theoretical analysis, it is likely I would have
approached the interviews in a slightly different manner. For example, I may have
use prompts within the interviews to elicit more detail around the origins of the
meanings participants ascribed to different foods, and the ways in which they
regulated their broader food practices. I may also have aimed to collect more detailed
information in order to make more accurate estimations of participants’ levels of
capital/resources.

Whilst I argue that broad judgments could be made about the levels of resources/
capital available to participants (such as distinguishing between very high- and very
low-resource participants) using the data available within the current project, indeed,
it was not possible to make accurate judgments about the finer grained differences
between participants with similar levels of resources. For example, using self-
reported income quintile was somewhat of a blunt instrument to use as the main measure of financial resources, as income quintiles do not take into account how a household’s income translates into the actual money that is available for food shopping within a household, or how the financial status of a household might change over time. Similarly, the current study is also limited because the quality of information gathered from participants about their cultural activities and social networks varied quite substantially across the group, as the significance of this data was not anticipated at the time the interviews were conducted.

Finally, because of the specific focus of the research questions on how considerations of cost and nutrition fed into participant’s perceptions of value around foods, the discourse analysis component of the current study was largely constrained to an examination of how participants drew on the two specific discourse of cost and nutrition in constructing themselves as food choosing subjects, despite the identification of several other salient discourses. The discourses around time and nurturing/caring appeared to be highly relevant to mothers’ perceptions of value in their food selections, and these certainly provide important opportunities for future investigations.

In spite of these limitations, the current study revealed some novel insights into the potential mechanisms that produce and reproduce socio-economic inequalities in the nutritional quality of food choices in the Australian context. In particular it has highlighted that not only practical, but also moral considerations are salient in how consumers make food purchasing choices around healthy and unhealthy foods, and the ways in which these were interpreted and perceived by individuals with varied levels of economic, social and cultural resources seemed to be quite distinct.

8.3.4 Summary, strengths and contributions of the qualitative phase

The qualitative findings revealed that both practical and moral considerations were integral to the ways in which participants perceived value around the foods they purchased. In addition, this analysis revealed that participants creatively engaged with the discourses that circulate in the field of food choice to construct both themselves as food choosing subjects, and their perceptions of value around food. However, participants with different levels of economic, social and cultural capital did so in distinctly different ways.
By using a governmentality lens, this analysis delved beyond the practicalities of food choice decisions, and illuminated how a diverse group of mothers drew on multiple, competing discourses in order to construct themselves as ‘good’ food choosing subjects. The strong moral discourses around making ‘healthy’ or ‘nutritious’ food choices, but also around spending money ‘wisely’ on food, had substantial implications for participants’ constructions of ‘good’ citizenship in modern society. By drawing on these discourses to construct themselves as ‘good’ food choosing subjects, all participants could therefore be seen to be actively seeking to improve themselves in line with the various objectives of the state.

The most important finding to emerge from the current analysis was the contrasting ways in which participants with different levels of resources prioritised the discourses of nutrition and cost when constructing their perceptions of value around their food choices. Participants with low levels of economic resources tended to place greater emphasis on the discourse of cost when constructing their perceptions of value around their food practices, while participants with high levels of social and cultural capital tended to give more attention to the discourse of nutrition. By rendering visible this process of moral prioritisation, and how it differs between individuals with different levels of resources, the current discourse analysis reveals how different socio-economic positions may be linked with different food purchasing choices. This diversity in the ways that different consumers balance competing moral imperatives around nutrition and cost when making their food choice therefore represents a potential mechanism that may contribute to the production and reproduction of socio-economic inequalities in the nutritional value of food choices more broadly.

By illuminating the different possible ways of prioritising discourse around food choice, these findings also raise some questions around the assumptions that we, as public health researchers and practitioners, might be making about the ways in which individuals make their food choices. By definition, public health perspectives privilege the discourse of nutrition in its constructions of ‘good value’ or ‘proper’ food choices. Thus, the moral imperatives around being thrifty in their food choices, which were strongly prioritised by participants in this study with lower levels of economic resources, are usually given little weight in public health discourses around food choice. This analysis therefore prompts us, as public health researchers and practitioners, to reflect on our own prioritisation of these discourses when
constructing notions of ‘good food’, particularly in relation to the moral priorities of the individuals and groups whose food choice behaviours we seek to ‘improve’.

It is crucial to stress that in interpreting the qualitative results of this study, and what they reveal about the social mechanisms underlying dietary inequalities, I do not intend to imply that a person’s level of resources determines their food purchasing choices. Rather, the findings here highlight that a person’s habitus, or way of seeing the world, may shape the particular ways in which they draw on the range of discourses that are available to them within their food and socio-cultural environments. In line with governmentality theory, the results of this study strongly suggest that individuals possess substantial levels of agency, or freedom, in selecting which foods they buy for their families. However, both the discourses that circulate around food in modern society, together with the resources individuals have at their disposal seem to make certain choices more attractive to certain people. As such, we can understand that having a particular level of a given resource (such as income) does not directly influence how ‘good’ or ‘bad’ a person’s behaviours or actions are, rather it may have a bearing on how they mobilise certain discourses, some of which, in specific contexts, are more privileged than others (Miller 2008).
Chapter 9
Mixed methods inferences and conclusion

9.1 Chapter overview

This chapter draws together the findings from both the quantitative and qualitative phases of this mixed methods study. It begins by outlining the two mixed methods inferences that were developed. Specific examples of key findings from each research phase are used to demonstrate how each of these inferences were reached. The strengths and limitations associated with the mixed methods approach used for this study are then identified, and the implications of the outcomes of this study for public health research and practice are discussed. The chapter, and thesis, concludes with a final summary detailing the key contributions it has made to this research field.

9.2 Mixed methods inferences

The term inference can be to refer to both the conclusions developed from the findings of a study and the process that occurs throughout the course of a study that leads to these conclusions being drawn (Miller 2003). In the first sense, inferences are defined as the outcomes of a study which “can take the form of explanations, understandings, or other accounts of what was learned” (Greene 2007, p. 167). The process of making inferences on the other hand, can be thought of as the “dynamic journey from ideas to data to results [that a researcher makes] in an effort to make sense of the data by connecting the dots” (Teddlie & Tashakkori 2009, p. 287). In this section, I present the two key inferences that I have reached through the collection and analysis of the quantitative and qualitative data, giving specific examples of how I have drawn on the findings from the two phases to enhance the transparency of my inference process.

This study set out to improve our understanding of the mechanisms that bring about socio-economic inequalities in food choices. The overall research question guiding the study was:

How do economic and socio-cultural factors contribute to the production and reproduction of socio-economic inequalities in the nutritional quality of food purchases?
I selected a mixed methods approach for this study for the purposes of complementarity and expansion. I aimed to use both quantitative and qualitative data to examine how economic factors may produce and reproduce these inequalities (complementarity). However, the main purpose of the mixed methods approach was to use the qualitative findings to build on those of the quantitative phase (expansion), by examining how both economic and socio-cultural factors may produce and reproduce these inequalities. Thus, it was hoped that the qualitative findings could be used to explain some of the patterns found in the quantitative data.

Drawing together the findings of the quantitative and qualitative phases of this study presented some challenges. Firstly, the substantially different nature of the quantitative HES data and the qualitative interview data makes the findings of the two phases somewhat difficult to directly compare. Therefore, in developing the mixed methods inferences, I focussed on the emphasis, or priority that consumers placed on healthy and unhealthy foods. This notion was evident in both phases, and therefore represents common ground on which these findings can be integrated. Secondly, measures of income were used in both phases of this mixed methods study, but in the qualitative phase, income, or financial resources, was only one of three types of resource that were ultimately used understand the social patterns that were evident in the ways that participants perceived value in the foods they purchased. Thus, when drawing together the findings from both research phases I compare the income-derived results from the quantitative phase with the findings from the high- and low-resource groups in the qualitative phase, as these groups had high and low levels of income respectively. When drawing on findings from individual mixed-resource participants from the qualitative study, I specify their levels of reported household income.

Each of the following two sub-sections begins with a statement of a mixed methods inference (in italics). These inferences statements relate the mixed method findings to the overall research question, and are followed by a discussion of how the findings from the both qualitative and quantitative phases led to these final conclusions. The first inference considers the findings of both studies together and discusses what has been learned by examining the relationship between income and food purchasing patterns of healthy and unhealthy foods from both quantitative and qualitative perspectives. The second inference highlights the how the qualitative findings build on those from the quantitative phase, providing possible explanations
for some of the complex food purchasing patterns that were revealed by, but not able to be explained by, the HES data.

9.2.1 The role of economic factors in the production of food choice inequalities

The findings from this mixed methods study indicate that the levels of economic resources (i.e., income) that consumers have at their disposal have a substantial influence on the way that they prioritise their purchases of healthy and unhealthy foods. However, the relationship between levels of economic resources and purchasing patterns of healthy and unhealthy foods is complex. That is, it is not the case that consumers with low levels of economic resources strongly and consistently prioritise unhealthy foods, nor that consumers with high levels of economic resources always place a strong emphasis on purchasing healthy foods. The complexity of this relationship confirms the need to look beyond economic resources as a simplistic explanation of the nutritional quality of food purchasing patterns.

Findings from both the quantitative and qualitative phases of the current study suggested that the ways in which Australian consumers prioritise, or give emphasis to the purchase of healthy and unhealthy foods was related to their level of income. However, findings from both phases also indicated that this relationship is complex.

The analysis of the HES data demonstrated that there was a relationship between economic resources and the ways in which Australian households allocated their grocery food expenditure between specific healthy and unhealthy foods groups. The findings highlighted how, in comparison to their higher-income counterparts, lower-income households allocated a greater proportion of their grocery expenditure, and thus gave greater emphasis, to the healthy food sub-groups of breads and cereals, core dairy foods and potatoes, as well as to the unhealthy food sub-groups of fats and oils and processed meats. At the same time, lower-income households allocated less of their grocery expenditure, and gave lower priority, to the healthy food group of fruit compared to the highest-income quintile households.

The complexity of the relationship between income and patterns of food purchases is evident here in the way that not all healthy or all unhealthy foods were given more emphasis by one group or the other. That is, specific healthy and unhealthy foods were treated in different ways by households in the lower- compared to higher-income quintiles. For example, breads and cereals were prioritised differently to fruits in the low- compared to high-income households. In addition,
households from some income quintiles gave a greater priority to some unhealthy food groups, but the income-related pattern was not linear across all five quintiles. For example, households in the middle-income quintiles allocated more of their grocery expenditure to the unhealthy food group of savoury snacks than did either the lowest- or highest-income quintiles. These different ways of prioritising different foods demonstrate the complexity of the relationship between income and the nutritional value of food purchasing choices.

The findings from the qualitative phase of this study also showed that participants’ levels of economic resources played an important role in the ways that they prioritised healthy and unhealthy foods. There was a strong tendency for participants in the low-resource group, to prioritise notions of saving money when constructing their perceptions of value around healthy and unhealthy foods. This sometimes, but not always, meant that foods of lower nutritional quality were prioritised, and therefore purchased. Participants in the high-resource group, did not give the same level of emphasis to saving money as the low-resource participants. Instead, they tended to give greater practical and moral priority to the quality of the foods they purchased, which often, but not always, included paying attention to the nutritional quality of the items they selected.

The complexity in the relationship between economic resources and the ways in which participants prioritised their purchases of healthy and unhealthy foods became apparent in the discourse analysis through the examination of the ways in which some mixed-resource participants constructed their perceptions of value when food shopping. The findings from the interviews with Anita and Deborah demonstrated that not all participants with similar levels of income prioritised healthy and unhealthy foods in the same way. Anita, who had high levels of income but low levels of social and cultural resources, did place substantial emphasis on purchasing healthy foods, but unlike the participants with high levels of all resources she did not emphasise the moral importance of restricting the purchase of unhealthy foods. Thus, she prioritised the purchase of healthy and unhealthy foods in substantially different ways to other participants with similarly high levels of income. Deborah, who had low levels of income but high levels of social and cultural resources, placed a strong emphasis on saving money, much like the participants with low levels of all types of resources. However, Deborah placed a much greater emphasis on maximising nutritional value when shopping for food compared to the low-resource participants. Thus, we can see that she too prioritised the purchase of healthy and unhealthy foods
in quite different ways to other participants with similarly low levels of income. Together, the findings from these two participants demonstrate that it is not always the case that consumers with high compared to low levels of economic resources give greater emphasis to considerations of health when constructing their perceptions of value around food. Thus, the qualitative finding also point to the complexity of the relationship between between economic resources and the prioritisation of healthy and unhealthy items when food shopping.

In combination, the findings from both phases of this mixed method study demonstrate that while income can and does have a substantial influence on the ways in which Australian consumers place priority on choosing healthy and unhealthy foods when food shopping, the relationship is not straightforward. The research question guiding this mixed methods study focussed on how both economic resources and socio-cultural resources may lead to the production of socio-economic inequalities in patterns of purchasing healthy and unhealthy foods. This question was developed in response to the deterministic nature of ‘purely’ economic approaches to understanding socio-economic inequalities in diet, which often do not situate food choices within the complex contexts of everyday life. The complexity of this relationship, between income and the prioritisation of healthy and unhealthy food purchases, confirms the need to look beyond economic resources as an isolated factor when seeking to understand how and why socio-economic inequalities in the nutritional value of food choices are produced and reproduced.

9.2.2 The role of economic and socio-cultural factors in the production of food choice inequalities

The current study demonstrated that complex patterns were evident in the ways that Australian consumers with different levels of economic resources prioritised their purchases of healthy and unhealthy foods. One possible mechanism that may explain these patterns is the different ways in which consumers with different levels of economic, social and cultural resources engage with and prioritise the multiple, often competing discourses that circulate in the field of food choice to construct their perceptions of value around healthy and unhealthy foods.

The findings from both phases of this mixed methods study demonstrated a complex relationship between income and the way that households prioritised their purchases of healthy and unhealthy foods. The qualitative phase was used to expand
the scope of this study to consider the ways in which both economic and socio-cultural factors might be understood to produce and reproduce to inequalities in the nutritional value of food choices. In this phase, I examined how a broader understanding of resources could be employed to understand the different ways in which participants perceived value in healthy and unhealthy foods. I identified that one mechanism that may contribute to the production and reproduction of inequalities in food choices is the different ways in which consumers with different levels of economic, social and cultural resources creatively draw on, and prioritise, the discourses of cost and nutrition when constructing their perceptions of value around healthy and unhealthy foods.

The rest of this section aims to demonstrate the integrity of this proposed mechanism that may underpin food choice inequalities by drawing together the findings from both phases of this study. Specifically, I use the qualitative findings to explain some of the complex income-related food purchasing patterns identified in the quantitative phase. To do this, three specific findings from the quantitative phase are presented below. These examples were selected as not only did they represent the complex nature of the relationship between income and purchasing patterns of healthy and unhealthy foods evident in the HES data, but they were also related to items that were discussed in substantial detail by most participants in the qualitative phase. For each example, I demonstrate how the different ways in which participants constructed their perceptions of value around foods can help to explain the patterns seen in the quantitative data.

**Example 1: Breads, breakfast cereals and milk**

The findings from the quantitative phase showed that higher-income households allocated significantly less of their proportional expenditure to the healthy food groups of breads and cereals and core dairy foods in comparison to lower-income households. These findings are interesting, as on one hand they reflect the findings of similar previous study (Kirkpatrick & Tarasuk 2003), but on the other they conflict with the general characterisation of the diets of low-income groups being less healthy than those of high-income groups. The findings from the qualitative phase offer some insight into why the lower-income quintiles may have given more emphasis to these food groups, in terms of their allocation of grocery expenditure, in comparison to the higher-income quintiles.
In the qualitative phase, high- and low-resource participants perceived the value around foods items of bread, breakfast cereals and milk in similar ways. This was evident from their overall functional approach to these foods items, and from the ways they drew on the discourses of cost and nutrition when constructing their perceptions of value around these foods.

Both groups tended to treat bread, breakfast cereals and milk as ‘staple’ items. All participants discussed these food items as basic or necessary items that were an essential part of their families’ regular diets. This shared, functional characterisation of these food items suggests that there was no greater or lesser emphasis placed on these foods by either high- or low-resource participants when food shopping. Thus, these foods can be understood to be standard grocery items, bought in equal, but fairly substantial quantities by most households.

The discourses of nutrition and cost did not seem to strongly conflict when participants discussed their purchases of breads, breakfast cereals or milk. As they did for all foods, high-resource mothers placed a strong emphasis on the nutritional quality of these food items, while the low-resource mothers prioritised issues of cost. Although the low-resource participants did at times note that healthier options (such as wholegrain bread) were slightly more expensive, the high-resource participants did not discuss having to pay substantially more to obtain what they perceived to be healthy options within these food categories. In general, most participants seemed able to obtain foods that they felt were both reasonably healthy and reasonably priced. In some cases, such as for breakfast cereals, healthy options like Weetbix or rolled oats were in fact cheaper than some less healthy breakfast cereals. In addition, many of the high-resource mothers discussed choosing the generic, cheaper brands of milk. They identified this as a good way to save money as they perceived the product to be of equal quality to the more expensive brands. Thus, the ways in which the high-resource participants creatively engaged with the cost discourse around milk also made their perceptions of value around this food very similar to those of the low-resource participants.

The similar perceptions of value that participants in the qualitative study constructed around breads, breakfast cereals and milk offer a possible explanation for the negative relationships seen between income and the allocation of grocery expenditure to the groups of breads and cereals and dairy foods in the quantitative phase. The qualitative findings suggest that all income groups may purchase similar quantities of these foods. In addition, these findings suggest that while higher-income
groups might pay slightly more for some of these items than lower-income groups, the price differences paid for these foods are unlikely to be very large. Therefore, it seems likely that low- and high-income households would spend relatively similar amounts of money on these food items. As higher-income households spend more (in dollar terms) on their overall grocery purchases, a similar levels of spending on one food group across all income groups would equate to lower proportional spending in high- compared to low-income households. The qualitative findings of this study therefore provide a useful explanation for the income-related purchasing patterns seen in the food groups of breads and cereals and core dairy products in the quantitative phase.

Example 2: Fruits and vegetables

In the HES data, fruit was the only healthy sub-group that displayed a positive relationship between income and the allocation of proportional grocery expenditure. This pattern indicated that higher-income households placed a greater emphasis on this food group when shopping for foods in comparison to lower-income households. In contrast, the allocation of proportional expenditure to the other vegetables sub-group which included all vegetables except potatoes, displayed no relationship to income despite being similar from a nutritional perspective to fruit. The qualitative results offer some possible explanations for why fruit in particular might be given a greater emphasis in the food purchasing patterns in higher compared to lower-income households, and why vegetables were not.

The different ways in which high- and low-resource mothers, in the qualitative phase, prioritised the discourses of cost and nutrition when discussing fruits and vegetables points to why these divergent expenditure patterns in fruits and vegetables may be produced. The high-resource group consistently prioritised the discourse of nutrition over that of cost when discussing their food management and purchasing practices around fruit. They placed a strong emphasis on the importance of fruit consumption for all family members, but particularly for children. These mothers often pointed out how they purchased fruits frequently and/or in large amounts, and aimed to by high quality fruits, which they often noted were substantially more expensive than the standard quality fruits available in supermarkets.

In contrast, the low-resource group did talk about fruit as an important, healthy food, but discussed it as a more functional, everyday item. These participants gave most emphasis to the school requirement of including fruit in children’s lunchboxes.
Low-resource participants often constructed their perceptions of value around fruit by prioritising the discourse of cost over that of nutrition. In particular these mothers noted that fruit was a relatively expensive snack food. Additionally, the perishable nature of fresh fruit made it somewhat of a ‘risky’ food as there was a high chance that it would go to waste if it wasn’t consumed relatively quickly. The ways in which the low-resource group perceived value in fruit was therefore quite different to that of the high-resource group. They spoke of buying smaller amounts of cheap or standard priced fruit in comparison to the high-resource participants, and substituting processed for fresh fruit more often. These qualitative findings around general patterns of purchasing around fruit, with high-income groups purchasing more fruit at higher prices than the low-income group align well with the quantitative findings of increasing levels of proportional expenditure allocated to fruit.

Explanations for the quantitative finding of no income-related pattern of expenditure for the other vegetable food sub-group, and thus a similar priority placed on this food by all households, are less clear from the qualitative findings. However, some tentative conclusions can be drawn. Vegetables were mentioned as a staple food within family diets across all participants. There was a greater emphasis placed on the nutritional importance of maintaining high levels of vegetable consumption in the high-resource group, however, it was far less obvious than for fruit. High-resource participants did, for example, discuss preparing vegetarian meals for the family more often, and spoke of selecting a wider range of vegetables than their low-resource counterparts. In comparison to fruits, there was less of a trade-off required between price and quality discussed around vegetables. The discourses of nutrition and cost did not seem to be prioritised as obviously by either group when constructing perceptions of value around vegetables. Also, the perishable nature of vegetables was less problematic than it was for fruits. Participants from low-resource group did not discuss vegetables as ‘risky’ food items in terms of the discourse of thrift/cost.

The qualitative findings therefore suggest that the ways that high- and low-resource participants prioritised the discourses of nutrition and cost in their constructions of value were substantially different for fruits compared to vegetables. High-resource participants placed a much greater emphasis on the value of, and therefore the purchase of, fruits than the low-resource participants did. Substantial differences in constructions of value around vegetables were not nearly so obvious. While the qualitative findings for vegetables, on their own, provide a more tentative
explanation for the quantitative patterns than the those for fruit, the contrasts
highlighted here suggest that the ways in which consumers draw on and prioritise
different discourses provide one potential mechanism for the complex income-related
patterns of grocery expenditure allocated to these two healthy food groups.

**Example 3: Potato chips (crisps)**

In the HES data, the allocation of grocery expenditure to the sub-group of savoury
snacks was unusual. Both the middle- and fourth- income quintiles allocated
significantly more expenditure to this food group than the highest-income quintile,
but there were no differences evident between the lowest two quintiles and the
highest quintile. Thus, the pattern of expenditure seemed to rise then fall as income
rose. Although most participants didn’t spend much time discussing savoury snacks
in a broad sense, all participants did discuss potato chips to a some degree.
Participants with different levels of economic, social and cultural resources had
markedly different ways of constructing value around potato chips, and these
findings offer a tentative explanation for the unusual patterns seen in the savoury
snacks food groups in the HES data.

The ways that high- and low-resource participants constructed their perceptions
of value around chips were very different. When discussing chips, the low-resource
participants prioritised the discourse of cost over that of nutrition. They constructed
chips as ‘good value’ food items, describing them as a cheap and useful snack that
was often included in children’s lunchboxes or used as a family snack. In contrast,
the high-resource participants prioritised the discourse of nutrition over that of cost.
These participants did not construct chips as ‘good value’ food items. Rather, high-
resource participants spoke of restricting the everyday consumption of this unhealthy
food product, but usually noted it was purchased, and enjoyed as an occasional treat.
When they did purchase chips, these mothers sometimes noted that they selected the
standard or more expensive branded products, rather than the generic brands (or
standard brands on special) favoured by low-resource mothers. These qualitative
findings therefore suggest that low-resource participants bought chips regularly, but
tended to select low price options, while high-resource participants did not buy chips
very often but perhaps spent more money on them when they did.

The most useful qualitative finding that can be used to explain the complex
quantitative results seen for savoury snacks is the way that Anita, a mixed-resource
participant, drew on the discourses to construct her perceptions of value around
chips. Anita had high levels of economic resources, but low levels of social and cultural resources. In general, Anita tended to prioritise quality over cost, just like the high-resource participants. But, Anita drew on the discourse of nutrition quite differently. In contrast to the high-resource participants, Anita did not draw on the elements of the nutrition discourse that focussed on the importance of restricting consumption of unhealthy foods. She described regularly buying multipacks of chips as everyday, family snacks, and thus constructed them as ‘good value’ items in much the same way as the low-resources participants. Unfortunately, Anita did not mention the brand or cost of the chips she bought. However, given her high level of economic resources, and reduced focus on the discourse of cost, it is likely that she bought standard brands of chips rather than particularly cheap, generic branded items.

The complex ways in which participants in the qualitative phase constructed their perceptions of value around potato chips provides a tentative explanation for the patterns of rising, then falling proportional allocation of grocery expenditure to the savoury snacks food group in the quantitative phase. As detailed above, the findings from the qualitative phase suggest that consumers with low levels of all resources may tend to buy potato chips regularly, and therefore in substantial quantities, but select items with low prices. As economic resources rise, it is likely that higher prices are paid for these items, as consumers can afford to purchase more expensive brands. However, it is the levels of social and cultural resources that seem to change the way that consumers perceive value in chips, not economic resources. The differences evident in the ways that Anita and the high-resource participants constructed value around chips suggest that consumers with higher levels of social and cultural resources may tend to be more focussed on the poor nutritional value of chips, and thus restrict their purchase and consumption. Together, these findings suggest that there may be a group of consumers in the middle of the income spectrum who have high enough levels of economic resources to reduce their emphasis on the discourse of cost, and therefore spend more money on food items like chips, but do not have levels of social and cultural resources that would lead them to draw strongly on the restrictive elements of the nutrition discourse, and therefore tightly regulate their consumption and purchase of this unhealthy food item.
9.3 Strengths and limitations of the mixed methods approach

Strengths of this mixed methods study

It is important that the original purposes for employing a mixed methods research design are reflected in the inferences produced from a mixed methods study (Teddlie & Tashakkori 2009). In this study, the first inference reflects the mixed methods purpose of complementarity. As described above, this inference considered the findings of both studies together, and highlighting how the influence of income on the nutritional quality of food purchasing patterns was examined from both ‘macro’ and ‘micro’ perspectives (Creswell et al. 2011). Substantial agreement was found between the findings from both phases. The second inference reflected the main purpose for mixing methods within this study, which was for expansion. This inference considered the findings of both phases together in light of the overarching research question. In the explanation of the second inference, I demonstrated how the ways in which both economic and socio-cultural factors were linked to different ways of perceiving value in foods in the qualitative phase could provide some possible explanations for the income-related patterns seen in the qualitative data. Thus, the findings from both phases, when used together expanded the breadth and scope of the study.

By using a mixed methods approach, the current study achieved a better understanding of the ways in which economic and socio-cultural factors are related to socio-economic inequalities in diet, than could have been gained by using only quantitative or qualitative methods in isolation. If using only quantitative methods, this study would have provided a descriptive account of the relationships between income and patterns of household expenditure to healthy and unhealthy grocery foods in Australian households. I would not have been able to explore in depth why certain healthy and unhealthy foods are given more or less priority in households with different levels of income. If using only qualitative methods, this study would have been limited to examining how mothers from a range of socio-economic backgrounds regulated their food purchasing practices by drawing on the multiple discourses that circulate around foods. The qualitative insights gained in this study were very valuable, but as they were inductively derived from a small group of participants, these findings are highly contextualised, and therefore on their own it would be more difficult to determine their relevance to the food purchasing patterns in the broader community. In combination, the quantitative and qualitative findings
of this study therefore provide a broad picture of the complex income-related patterns of healthy and unhealthy food purchasing that exist in Australia, and provide some possible explanations for why these patterns may be produced and reproduced. By linking the results of the two phases together, we can see that the mechanism identified here does have substantial potential to explain some of the socio-economic patterns in the nutritional value of food choices at a broader population level.

**Limitations of this mixed methods study**

The limitations of each of the independent quantitative and qualitative phases were identified in the relevant sections of the discussion chapter (Chapter 8). But, there are also some specific limitations associated with the mixed methods study design itself.

The current mixed methods study design used entirely independent datasets for the quantitative and qualitative phases of this mixed methods research process. The quantitative phase used a large, nationally representative dataset, while the qualitative phase used interview data gathered from a small, purposively-selected sample of consumers from Melbourne, Victoria. Drawing mixed methods inferences from the findings from two unrelated datasets such as this can be problematic. In particular a design such as this is limited in the scope of which conclusions drawn can be related back to a population level (Onwuegbuzie & Johnson 2006). A further limitation of combining the two datasets used in this study is that the quantitative data was collected approximately five years before the qualitative data. As such, I make only modest claims for the inferences developed from the findings of the current study. I do not suggest that the explanations around the ways that consumers construct their perceptions of value around food account for the income-related patterns of food expenditure seen in the quantitative data at a population level. Rather, I argue that the findings of the current study point to one potentially important mechanism that may contribute to the production and reproduction of socio-economic inequalities in the nutritional quality of food choices. This particular mechanism has not been previously identified in the public health literature and is therefore worthy of further investigation.

The independent nature of the two phases of the current mixed methods study can also be seen as a limitation of my approach. The primary purpose of this mixed methods study was expansion, that is I sought to examine the separate but related ‘what’ and ‘why’ aspects of socio-economic inequalities in nutritional quality of food choices. Component mixed methods designs (often referred to as concurrent/parallel
designs), where the quantitative and qualitative phases of the study are kept entirely separate up to the point of drawing mixed methods inferences, are more simplistic than those designs which integrate aspects of the quantitative and qualitative methods more comprehensively throughout all stages of the research process (Greene 2007; Tashakkori & Newman 2010). While component designs are very common in studies undertaken with a primary purpose of expansion (Greene et al. 1989), a more integrated mixed methods design would have presented greater opportunities for the application of a more sophisticated ‘mixed methods way of thinking’ (Greene 2007), and as such may have had the potential to produce more insightful understandings of the mechanisms underlying socio-economic inequalities in the nutritional quality of food choices (Caracelli & Greene 1997). Future studies investigating the practical and moral aspects of the ways in which different people perceive both healthy and unhealthy foods could perhaps gather and analyse both quantitative and qualitative data from a single sample or nested samples of consumers. They might also integrate the two methods throughout all stages of the research process, in order to conduct a more robust mixed methods study, and generate further insights into the potential mechanisms underlying socio-economic inequalities in food choices.

9.4 Contribution to the field of public health nutrition

Public health seeks to change behaviour and improve the health of the population. In undertaking the current research, I did not set out to offer specific solutions to the public health problem of socio-economic inequalities in the nutritional value of food choices. Rather, I sought to contribute to, and build on current public health understandings of the mechanisms that play a role in the development and ongoing existence of these socially-patterned food choice behaviours. As such, the findings of the current study have some important implications for future public health nutrition researchers, practitioners and policy makers.

The current study reveals the contrasting ways in which consumers with different levels of economic, social and cultural resources may creatively draw on, and prioritise, the discourses of nutrition and cost when constructing their perceptions of value around healthy and unhealthy foods. This constitutes a previously unidentified, potential mechanism through which socio-economic inequalities in the nutritional value of food choices may be produced and reproduced. By identifying this way in which socio-economic factors may be linked with different food purchasing behaviours, the findings of this study contribute to the foundation on which future
research in this area may be built. Future studies could further examine the ways in which the discourses of nutrition and cost circulate around everyday food choices. In particular, further exploring the ways in which people from mixed-resource backgrounds constitute themselves as food choosing subjects could assist in understanding of the complexities of how different amounts and/or types of resources may influence food choice decisions. Given that the majority of people in modern society could be described as having mixed resources, this is an important avenue for future work. Other possible avenues for further investigation include, but are not limited to, exploring the ways in which consumers from other population groups regulate their food choice behaviours, extending the scope of a similar discourse analysis to more thoroughly investigate a wider range of discourses (such as that of time or caring/nurturing), or examining the ways in which relevant discourses are created and maintained via government and/or institutional policies, expert opinion and the popular media.

The most substantial contribution of this mixed methods study however, is the questions that it raises for and around current public health research, practice and policy making in the area of food choice inequalities. By inductively applying a governmentality lens to explore the mechanisms underlying socio-economic inequalities in the nutritional quality of food choices, I ultimately took a critical approach to understanding the ways in which these patterns are produced and reproduced in the Australian context. My approach was critical in a Foucauldian sense:

“A critique does not consist in saying that things aren't good the way they are. It consists in seeing on what type of assumptions, of familiar notions, of established, unexamined ways of thinking the accepted practices are based.” (Foucault 1994, p. 456)

As such, I interrogated the usually taken for granted assumptions surrounding the food choices made by a range of Australian consumers with both high and low levels of economic, social and cultural resources. In doing so, I highlighted that consumers with different levels of resources placed different emphases on the practical but also, more importantly, the moral considerations that guide their food choices. By revealing these different moral motivations, the findings of this study raise questions around how public health researchers and practitioners (myself included) prioritise these discourses when considering both our own food choices and most crucially, those of others.
For example, when used to reflect on recommendations made in the public health literature for policy and/or interventions aimed at reducing socio-economic inequalities in the nutritional quality of diets, the findings from this study can highlight some assumptions that are made about the motivations underpinning the food choices of lower socio-economic groups. Recommendations in this area often focus on the practical motivations of those with lower levels of economic resources, such as saving money when buying foods, but fail to consider the moral importance that these types of strategies may have. An example of such a recommendation was developed from the findings of a recent investigation of fruit and vegetable purchasing patterns in the USA:

“The present results underscore the need to work with lower-income households on issues of budgeting. Improving diet quality requires not only encouraging these households to eat more fruits and vegetables, but also persuading them to make room in their budgets. Less money can be spent on other food bought for reasons of taste and convenience, especially high-calorie, low-nutrient food. Continued research by nutrition educators is needed to identify effective strategies for communicating both goals—spending less money on some food items and devoting that money to fruits and vegetables” (Stewart et al. 2011b, p. 178)

I do not intend to single out Stewart and colleagues’ study, rather, I present it as an unmistakable example of the assumptions that are sometimes made within the public health discourse more generally. It is not uncommon for studies such as this, that identify differences in the nutritional quality of food choices or purchases in line with income, to infer that these results indicate a ‘need’ to ‘teach’ low-income groups better budgeting skills (see for example Wiig & Smith (2009) or Williams et al. (2010)). However, in the current study, participants with low levels of income were, on the contrary, highly skilled at budgeting for their food purchases and carefully allocating their food spending to their preferred range of food items. It was not that these participants didn’t ‘know’ how to control their spending on different food items, rather they allocated their money to foods in a way that reflected their own moral priorities, which, depending on the resources they had at their disposal, were not necessarily in line with those of public health nutritionists.

The current study therefore supports the calls from other work in the critical public health literature to carefully reflect on the assumptions that are inherent in our approaches to public health ‘problems’ (Bacchi 2009). In particular, it points to the importance of interrogating our own assumptions and ways of constructing particular
food choices in light of those of the people whose behaviour we seek to change (Crawshaw 2012; Lindsay 2010). This critical reflection on the moral aspects of health behaviours, such as making food choices, is an essential foundation for developing useful and effective public health interventions and policy.

9.5 Final summary

This study has investigated the ways in which both economic and socio-cultural factors contribute to the production and reproduction of socio-economic inequalities in the nutritional quality of food purchases in the Australian context. In doing so it has revealed that one mechanism that is likely to be linking these factors with socio-economic inequalities in diet is the contrasting ways in which different consumers perceive value in the foods that are available to them.

By examining how a diverse group of consumers constructed their notions of themselves as food choosing subjects, this study highlighted how the ways in which they perceived value in healthy and unhealthy foods were strongly tied to both the practical and moral issues that they encountered when shopping for, and managing food, within their everyday contexts. Most importantly, this study demonstrated that the levels of economic, social and cultural resources which consumers had at their disposal shaped the ways in which they ascribed the moral meanings around nutrition and cost to their practices of buying healthy and unhealthy foods. For consumers with low levels of economic resources, the moral concerns around being thrifty and the costs of foods tended to be prioritised. For consumers with high levels of social and cultural resources, the moral concerns around the quality and the nutritional value of foods tended to be prioritised.

In revealing the ways in which consumers’ different resources are linked to their perceptions of value in healthy and unhealthy foods, this research makes a significant contribution to public health nutrition’s understanding of the potential mechanisms that might explain how socio-economic inequalities in diet are produced and reproduced. The ways in which different moral constructions of value around healthy and healthy foods may contribute to the production and reproduction of socio-economic inequalities in health therefore offer a valuable avenue for future research.

Most importantly, the findings of this study highlight the importance of reflecting on the ways in which we, as public health researchers and practitioners, both collectively and individually, construct our own perceptions of value around
different food choices. By understanding and acknowledging that our own ways of ascribing moral meaning to healthy and unhealthy foods choices may not necessarily be reflected in those of the people whose behaviour we seek to change, we are better able to work towards developing effective public health policy and practice.
ABS - See Australian Bureau of Statistics


AIHW - See Australian Institute of Health and Welfare


OpenDocument>


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NHMRC- see National Health and Medical Research Council

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Appendix A

Classification of ABS food items within the HES analysis
Table A1: Details of how the ABS food items were allocated to sub-groups for the ABS analysis

<table>
<thead>
<tr>
<th>ABS food items</th>
<th>Food sub-group within the current study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Food items classified as healthy foods</strong></td>
<td></td>
</tr>
<tr>
<td>0301010101.  Bread</td>
<td>Breads/cereals</td>
</tr>
<tr>
<td>0301020101.  Flour</td>
<td>Breads/cereals</td>
</tr>
<tr>
<td>0301040101.  Breakfast cereals</td>
<td>Breads/cereals</td>
</tr>
<tr>
<td>0301040201.  Pasta</td>
<td>Breads/cereals</td>
</tr>
<tr>
<td>0301040301.  Rice</td>
<td>Breads/cereals</td>
</tr>
<tr>
<td>0301049999.  Cereals and pasta nec</td>
<td>Breads/cereals</td>
</tr>
<tr>
<td>0302020101.  Prepared beef and veal</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0302020199.  Beef and veal nec</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0304010101.  Fresh eggs</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0304019999.  Eggs and egg products nec</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0302030101.  Prepared mutton and lamb</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0302030199.  Mutton and lamb nec</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0307030201.  Nuts</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0302000000.  Meat (excluding fish and seafood) nfd</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0302010101.  Ham (including canned)</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0302019901.  Mince</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0302060101.  Game</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0302070101.  Offal</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0302999999.  Meat (excluding fish and seafood) nec</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0302040101.  Prepared pork (excluding bacon and ham)</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0302040199.  Pork (excluding bacon and ham) nec</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0302050101.  Prepared poultry</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0302050199.  Poultry nec</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0303000000.  Fish and seafood nfd</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0303010101.  Fresh fish and seafood</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0303010201.  Frozen fish and seafood</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0303019999.  Fish and seafood nec</td>
<td>Meats and alternatives</td>
</tr>
<tr>
<td>0305010101.  Fresh milk</td>
<td>Core dairy foods</td>
</tr>
<tr>
<td>0305010301.  Cheese</td>
<td>Core dairy foods</td>
</tr>
<tr>
<td>0305010501.  Powdered milk</td>
<td>Core dairy foods</td>
</tr>
<tr>
<td>0305010601.  Yoghurt</td>
<td>Core dairy foods</td>
</tr>
<tr>
<td>0310049901.  Soy and non-dairy milks</td>
<td>Core dairy foods</td>
</tr>
<tr>
<td>0307010000.  Fresh fruit nfd</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307010101.  Fresh citrus fruit</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307010201.  Fresh stone fruit</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307010301.  Fresh apples and pears</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307019901.  Fresh berries</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307019902.  Fresh grapes</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307019903.  Fresh melons</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307019904.  Fresh tropical fruit (excluding bananas)</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307019905.  Fresh bananas</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307019999.  Fresh fruit nec</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307000000.  Fruit and nuts nfd</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307020101.  Canned, frozen and bottled fruit</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307030100.  Dried fruit nfd</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307030101.  Dried grapes</td>
<td>Fruit</td>
</tr>
<tr>
<td>0307030199.  Dried fruit nec</td>
<td>Fruit</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>0308010000</td>
<td>Fresh vegetables nfd</td>
</tr>
<tr>
<td>0308010101</td>
<td>Fresh potatoes</td>
</tr>
<tr>
<td>0308010201</td>
<td>Fresh onions</td>
</tr>
<tr>
<td>0308010301</td>
<td>Other fresh root vegetables</td>
</tr>
<tr>
<td>0308010401</td>
<td>Fresh tomatoes</td>
</tr>
<tr>
<td>0308019901</td>
<td>Fresh flower vegetables</td>
</tr>
<tr>
<td>0308019902</td>
<td>Fresh leaf vegetables</td>
</tr>
<tr>
<td>0308019903</td>
<td>Fresh peas and beans</td>
</tr>
<tr>
<td>0308019904</td>
<td>Fresh pumpkin</td>
</tr>
<tr>
<td>0308019999</td>
<td>Fresh vegetables nec</td>
</tr>
<tr>
<td>0308000000</td>
<td>Vegetables nfd</td>
</tr>
<tr>
<td>0308020101</td>
<td>Frozen vegetables</td>
</tr>
<tr>
<td>0308999999</td>
<td>Other vegetables</td>
</tr>
<tr>
<td>0310020000</td>
<td>Fruit and vegetable juice nfd</td>
</tr>
<tr>
<td>0310020201</td>
<td>Vegetable juice</td>
</tr>
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</table>

**Food items classified as unhealthy foods**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>0302010201</td>
<td>Bacon (including canned)</td>
<td>Non-core meats</td>
</tr>
<tr>
<td>0302010301</td>
<td>Sausages (not continental)</td>
<td>Non-core meats</td>
</tr>
<tr>
<td>0302010401</td>
<td>Canned meat (other than bacon and ham)</td>
<td>Non-core meats</td>
</tr>
<tr>
<td>0302010501</td>
<td>Frozen processed meat</td>
<td>Non-core meats</td>
</tr>
<tr>
<td>0302019902</td>
<td>Smallgoods</td>
<td>Non-core meats</td>
</tr>
<tr>
<td>0302019999</td>
<td>Processed meat nec</td>
<td>Non-core meats</td>
</tr>
<tr>
<td>0306010101</td>
<td>Margarine</td>
<td>Fats and oils</td>
</tr>
<tr>
<td>0306019999</td>
<td>Edible oils and fats nec</td>
<td>Fats and oils</td>
</tr>
<tr>
<td>0305010201</td>
<td>Fresh cream</td>
<td>Fats and oils</td>
</tr>
<tr>
<td>0305010401</td>
<td>Butter</td>
<td>Fats and oils</td>
</tr>
<tr>
<td>0309040201</td>
<td>Sauces and salad dressings</td>
<td>Dips and dressings</td>
</tr>
<tr>
<td>0309040301</td>
<td>Spreads and dips</td>
<td>Dips and dressings</td>
</tr>
<tr>
<td>0309030101</td>
<td>Potato crisps and other savoury confectionery</td>
<td>Savoury snacks</td>
</tr>
<tr>
<td>0309020401</td>
<td>Jellies and desserts</td>
<td>Confectionary and desserts</td>
</tr>
<tr>
<td>0309030201</td>
<td>Chocolate confectionery</td>
<td>Confectionary and desserts</td>
</tr>
<tr>
<td>0309030301</td>
<td>Ice confectionery (including ice cream)</td>
<td>Confectionary and desserts</td>
</tr>
<tr>
<td>0309039999</td>
<td>Confectionery nec</td>
<td>Confectionary and desserts</td>
</tr>
<tr>
<td>0309010101</td>
<td>Sugar</td>
<td>Confectionary and desserts</td>
</tr>
<tr>
<td>0309020101</td>
<td>Marmalades, jams and conserves</td>
<td>Confectionary and desserts</td>
</tr>
<tr>
<td>0309020201</td>
<td>Honey</td>
<td>Confectionary and desserts</td>
</tr>
<tr>
<td>0309020301</td>
<td>Syrups</td>
<td>Confectionary and desserts</td>
</tr>
<tr>
<td>0301030101</td>
<td>Cakes, tarts and puddings (fresh or frozen)</td>
<td>Cakes/biscuits</td>
</tr>
<tr>
<td>0301030201</td>
<td>Biscuits</td>
<td>Cakes/biscuits</td>
</tr>
<tr>
<td>0301030301</td>
<td>Cake, biscuit, pudding and bread mixes</td>
<td>Cakes/biscuits</td>
</tr>
<tr>
<td>0310010101</td>
<td>Soft drinks</td>
<td>Non-core drinks</td>
</tr>
<tr>
<td>0310049999</td>
<td>Food drinks nec</td>
<td>Non-core drinks</td>
</tr>
<tr>
<td>0310050101</td>
<td>Cordials</td>
<td>Non-core drinks</td>
</tr>
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</table>

**Food items classified as mixed foods**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>0309040101</td>
<td>Spices and herbs</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0309040401</td>
<td>Other food additives</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0310010102</td>
<td>Packaged waters</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0310020301</td>
<td>Mixed fruit and vegetable juice</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0310050201</td>
<td>Unpackaged milk-based beverages</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0310020101</td>
<td>Fruit juice</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0399010201</td>
<td>Non-alcoholic beverages nec</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Category</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>0310000000.</td>
<td>Non-alcoholic beverages nfd</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0310030101.</td>
<td>Tea</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0310030201.</td>
<td>Coffee</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0300000000.</td>
<td>Food and non-alcoholic beverages nfd</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0305019999.</td>
<td>Dairy products nec</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0399010101.</td>
<td>Food nec</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0309060101.</td>
<td>Canned and bottled baby foods</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0309050101.</td>
<td>Canned spaghetti and baked beans</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0310040101.</td>
<td>Canned and packeted soup</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0309060201.</td>
<td>Frozen prepared meals</td>
<td>Mixed foods</td>
</tr>
<tr>
<td>0309069999.</td>
<td>Packaged prepared meals nec</td>
<td>Mixed foods</td>
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</table>

**Food items classified as foods away from home**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>0311010201.</td>
<td>Fast food and take-away (not frozen)</td>
<td>Foods away from home</td>
</tr>
<tr>
<td>0311010301.</td>
<td>School lunch money</td>
<td>Foods away from home</td>
</tr>
<tr>
<td>0311010101.</td>
<td>Meals in restaurants, hotels, clubs and related</td>
<td>Foods away from home</td>
</tr>
</tbody>
</table>
Appendix B

Additional description of grocery expenditure allocated to healthy and unhealthy food sub-groups
Table B1: Proportional expenditure allocated to the healthy food subgroups

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Breads and cereals</th>
<th>Meats and alternatives</th>
<th>Core dairy foods</th>
<th>Fruit</th>
<th>Vegetables (incl. potatoes)</th>
<th>Potatoes</th>
<th>Vegetables (excl. potatoes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>10.1 (7.6)</td>
<td>19.4 (14.1)</td>
<td>11.2 (9.6)</td>
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<td>1.4 (2.2)</td>
<td>8.9 (7.5)</td>
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<tr>
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<td>10.4 (8.4)</td>
<td>7.6 (7.4)</td>
<td>9.9 (7.2)</td>
<td>1.3 (1.9)</td>
<td>8.6 (6.8)</td>
</tr>
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<td>3rd</td>
<td>9.1 (6.1)</td>
<td>19.0 (12.2)</td>
<td>10.5 (8.3)</td>
<td>7.5 (7.1)</td>
<td>9.5 (6.6)</td>
<td>1.1 (1.6)</td>
<td>8.4 (6.2)</td>
</tr>
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<td>18.2 (10.8)</td>
<td>9.7 (6.2)</td>
<td>7.3 (6.1)</td>
<td>9.3 (5.5)</td>
<td>1.0 (1.4)</td>
<td>8.3 (5.2)</td>
</tr>
<tr>
<td>Highest</td>
<td>8.6 (4.7)</td>
<td>19.2 (10.9)</td>
<td>9.5 (6.0)</td>
<td>8.1 (6.0)</td>
<td>9.5 (5.6)</td>
<td>1.0 (1.2)</td>
<td>8.6 (5.4)</td>
</tr>
<tr>
<td>All quintiles</td>
<td>9.3 (6.4)</td>
<td>18.9 (12.2)</td>
<td>10.2 (7.9)</td>
<td>7.8 (7.1)</td>
<td>9.7 (6.7)</td>
<td>1.2 (1.7)</td>
<td>8.5 (6.3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Breads and cereals</th>
<th>Meats and alternatives</th>
<th>Core dairy foods</th>
<th>Fruit</th>
<th>Vegetables (incl. potatoes)</th>
<th>Potatoes</th>
<th>Vegetables (excl. potatoes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>11.1 (7.8)</td>
<td>15.3 (10.5)</td>
<td>10.3 (7.6)</td>
<td>6.4 (6.7)</td>
<td>8.3 (6.3)</td>
<td>1.2 (1.8)</td>
<td>7.1 (6.1)</td>
</tr>
<tr>
<td>2nd</td>
<td>10.4 (7.6)</td>
<td>16.5 (11.8)</td>
<td>10.1 (6.5)</td>
<td>6.4 (6.3)</td>
<td>8.5 (5.9)</td>
<td>1.1 (1.7)</td>
<td>7.4 (5.4)</td>
</tr>
<tr>
<td>3rd</td>
<td>9.8 (4.7)</td>
<td>16.5 (10.2)</td>
<td>10.6 (7.1)</td>
<td>5.9 (4.6)</td>
<td>8.4 (5.8)</td>
<td>1.1 (2.1)</td>
<td>7.3 (5.5)</td>
</tr>
<tr>
<td>4th</td>
<td>10.0 (5.2)</td>
<td>16.6 (9.2)</td>
<td>9.5 (5.5)</td>
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<td>8.2 (4.6)</td>
<td>0.9 (1.1)</td>
<td>7.3 (4.4)</td>
</tr>
<tr>
<td>Highest</td>
<td>9.6 (4.4)</td>
<td>17.6 (9.2)</td>
<td>9.9 (5.6)</td>
<td>8.1 (6.1)</td>
<td>8.5 (4.8)</td>
<td>1.0 (1.1)</td>
<td>7.5 (4.6)</td>
</tr>
<tr>
<td>All quintiles</td>
<td>10.0 (5.6)</td>
<td>16.7 (10.0)</td>
<td>10.0 (6.2)</td>
<td>6.8 (5.5)</td>
<td>8.4 (5.3)</td>
<td>1.0 (1.5)</td>
<td>7.3 (5.0)</td>
</tr>
</tbody>
</table>

Note: Proportional expenditure is not adjusted for co-variates.
Table B2: Total expenditure allocated to the healthy food subgroups

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Breads and cereals</th>
<th>Meats and alternatives</th>
<th>Core dairy foods</th>
<th>Fruit</th>
<th>Vegetables (incl. potatoes)</th>
<th>Potatoes</th>
<th>Vegetables (excl. potatoes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>6.05 (5.27)</td>
<td>14.27 (15.25)</td>
<td>6.51 (5.70)</td>
<td>5.58 (6.44)</td>
<td>7.00 (6.83)</td>
<td>0.95 (1.49)</td>
<td>6.04 (6.20)</td>
</tr>
<tr>
<td>2nd</td>
<td>7.78 (6.14)</td>
<td>17.59 (16.43)</td>
<td>8.34 (6.69)</td>
<td>7.17 (9.97)</td>
<td>8.87 (8.13)</td>
<td>1.20 (1.74)</td>
<td>7.67 (7.25)</td>
</tr>
<tr>
<td>3rd</td>
<td>9.47 (7.34)</td>
<td>21.97 (18.88)</td>
<td>10.44 (7.83)</td>
<td>8.23 (8.53)</td>
<td>10.50 (8.66)</td>
<td>1.19 (1.66)</td>
<td>9.31 (8.09)</td>
</tr>
<tr>
<td>4th</td>
<td>12.05 (8.11)</td>
<td>25.29 (19.67)</td>
<td>12.59 (8.67)</td>
<td>9.95 (9.46)</td>
<td>12.53 (9.11)</td>
<td>1.34 (1.64)</td>
<td>11.19 (8.52)</td>
</tr>
<tr>
<td>Highest</td>
<td>13.68 (9.16)</td>
<td>32.98 (25.13)</td>
<td>14.76 (10.06)</td>
<td>13.29 (11.93)</td>
<td>15.66 (11.12)</td>
<td>1.59 (1.92)</td>
<td>14.08 (10.52)</td>
</tr>
</tbody>
</table>

| All quintiles   | 9.81 (7.84)       | 22.42 (20.42)          | 10.52 (8.46)    | 8.84 (9.80) | 10.91 (9.37)          | 1.26 (1.71) | 9.66 (8.70)     |

<table>
<thead>
<tr>
<th>Primary school households</th>
<th>Breads and cereals</th>
<th>Meats and alternatives</th>
<th>Core dairy foods</th>
<th>Fruit</th>
<th>Vegetables (incl. potatoes)</th>
<th>Potatoes</th>
<th>Vegetables (excl. potatoes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>10.80 (9.50)</td>
<td>17.82 (18.90)</td>
<td>9.97 (7.24)</td>
<td>6.47 (6.90)</td>
<td>8.39 (6.96)</td>
<td>1.30 (2.14)</td>
<td>7.08 (6.22)</td>
</tr>
<tr>
<td>2nd</td>
<td>10.64 (8.16)</td>
<td>19.14 (18.45)</td>
<td>10.54 (7.44)</td>
<td>7.04 (8.14)</td>
<td>9.72 (10.96)</td>
<td>1.32 (2.28)</td>
<td>8.40 (9.56)</td>
</tr>
<tr>
<td>3rd</td>
<td>13.12 (8.33)</td>
<td>23.45 (18.28)</td>
<td>13.50 (8.52)</td>
<td>7.99 (7.04)</td>
<td>11.26 (8.09)</td>
<td>1.43 (1.97)</td>
<td>9.83 (7.63)</td>
</tr>
<tr>
<td>4th</td>
<td>16.28 (9.64)</td>
<td>28.93 (20.50)</td>
<td>15.64 (9.82)</td>
<td>11.30 (9.48)</td>
<td>13.88 (9.33)</td>
<td>1.50 (1.66)</td>
<td>12.38 (8.81)</td>
</tr>
<tr>
<td>Highest</td>
<td>17.29 (9.64)</td>
<td>33.73 (23.07)</td>
<td>17.79 (10.90)</td>
<td>15.08 (13.45)</td>
<td>15.76 (10.57)</td>
<td>1.79 (2.07)</td>
<td>13.97 (9.87)</td>
</tr>
</tbody>
</table>

| All quintiles            | 14.59 (9.46)      | 26.62 (20.97)          | 14.53 (9.69)    | 10.49 (10.27) | 12.74 (9.79)          | 1.51 (1.97) | 11.23 (9.07)    |

Note: Total expenditure is not adjusted for co-variates
Table B3: Proportional expenditure allocated to the unhealthy food subgroups

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Non-core meats</th>
<th>Fats and oils</th>
<th>Dips and dressings</th>
<th>Savoury snacks</th>
<th>Confectionary and desserts</th>
<th>Cakes and biscuits</th>
<th>Non-core drinks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>3.7 (5.7)</td>
<td>2.5 (3.3)</td>
<td>1.9 (2.9)</td>
<td>1.0 (2.6)</td>
<td>7.6 (8.0)</td>
<td>6.2 (7.0)</td>
<td>3.4 (6.1)</td>
</tr>
<tr>
<td>2nd</td>
<td>3.7 (4.7)</td>
<td>2.2 (3.0)</td>
<td>1.9 (2.4)</td>
<td>1.4 (2.6)</td>
<td>8.0 (7.8)</td>
<td>5.8 (6.0)</td>
<td>5.1 (8.9)</td>
</tr>
<tr>
<td>3rd</td>
<td>3.2 (3.8)</td>
<td>1.8 (2.5)</td>
<td>2.1 (2.5)</td>
<td>1.8 (3.1)</td>
<td>8.1 (7.3)</td>
<td>5.6 (6.4)</td>
<td>5.5 (8.4)</td>
</tr>
<tr>
<td>4th</td>
<td>3.4 (3.6)</td>
<td>1.8 (2.5)</td>
<td>2.2 (2.2)</td>
<td>1.8 (2.4)</td>
<td>9.1 (7.1)</td>
<td>5.9 (4.6)</td>
<td>5.6 (6.4)</td>
</tr>
<tr>
<td>Highest</td>
<td>3.2 (3.2)</td>
<td>1.5 (1.8)</td>
<td>2.0 (2.0)</td>
<td>1.6 (1.9)</td>
<td>8.4 (6.4)</td>
<td>5.5 (4.6)</td>
<td>5.4 (7.0)</td>
</tr>
</tbody>
</table>

All quintiles    | 3.4 (4.3)      | 2.0 (2.7)    | 2.0 (2.4)          | 1.5 (2.6)      | 8.2 (7.4)                 | 5.8 (5.8)         | 5.0 (7.5)      |

Primary school households

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Non-core meats</th>
<th>Fats and oils</th>
<th>Dips and dressings</th>
<th>Savoury snacks</th>
<th>Confectionary and desserts</th>
<th>Cakes and biscuits</th>
<th>Non-core drinks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>3.8 (3.1)</td>
<td>1.8 (2.0)</td>
<td>1.9 (2.4)</td>
<td>2.8 (3.7)</td>
<td>9.4 (7.5)</td>
<td>6.2 (5.4)</td>
<td>5.5 (5.0)</td>
</tr>
<tr>
<td>2nd</td>
<td>3.9 (4.6)</td>
<td>1.5 (1.8)</td>
<td>2.1 (2.4)</td>
<td>2.7 (3.1)</td>
<td>9.6 (8.1)</td>
<td>5.3 (4.5)</td>
<td>5.4 (6.4)</td>
</tr>
<tr>
<td>3rd</td>
<td>3.6 (3.1)</td>
<td>1.7 (1.8)</td>
<td>2.1 (1.9)</td>
<td>2.8 (2.9)</td>
<td>9.3 (6.6)</td>
<td>5.8 (4.6)</td>
<td>5.5 (5.2)</td>
</tr>
<tr>
<td>4th</td>
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<td>1.6 (1.5)</td>
<td>2.2 (2.2)</td>
<td>2.5 (2.2)</td>
<td>10.6 (6.5)</td>
<td>6.3 (4.3)</td>
<td>5.4 (5.5)</td>
</tr>
<tr>
<td>Highest</td>
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<td>1.4 (1.4)</td>
<td>2.0 (1.6)</td>
<td>2.1 (2.1)</td>
<td>9.7 (6.2)</td>
<td>6.6 (4.5)</td>
<td>5.0 (5.2)</td>
</tr>
</tbody>
</table>

All quintiles    | 3.7 (3.5)      | 1.6 (1.6)    | 2.1 (2.1)          | 2.5 (2.6)      | 9.9 (6.8)                 | 6.1 (4.5)         | 5.3 (5.5)      |

Note: Proportional expenditure is not adjusted for co-variates
Table B4: Total expenditure allocated to the unhealthy food subgroups

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Non-core meats</th>
<th>Fats and oils</th>
<th>Dips and dressings</th>
<th>Savoury snacks</th>
<th>Confectionary and desserts</th>
<th>Cakes and biscuits</th>
<th>Non-core drinks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>2.44 (3.41)</td>
<td>1.65 (2.37)</td>
<td>1.32 (1.99)</td>
<td>0.79 (2.52)</td>
<td>4.92 (5.86)</td>
<td>3.98 (5.08)</td>
<td>2.18 (4.32)</td>
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<tr>
<td>2nd</td>
<td>3.22 (4.12)</td>
<td>1.90 (2.45)</td>
<td>1.73 (2.27)</td>
<td>1.21 (2.06)</td>
<td>6.96 (7.47)</td>
<td>5.00 (5.32)</td>
<td>3.64 (5.09)</td>
</tr>
<tr>
<td>3rd</td>
<td>3.69 (4.39)</td>
<td>2.10 (2.75)</td>
<td>2.43 (3.09)</td>
<td>1.84 (2.80)</td>
<td>8.81 (9.10)</td>
<td>6.13 (6.58)</td>
<td>5.37 (6.84)</td>
</tr>
<tr>
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<td>4.68 (5.19)</td>
<td>2.42 (3.22)</td>
<td>2.95 (3.06)</td>
<td>2.53 (3.08)</td>
<td>12.24 (11.25)</td>
<td>8.07 (7.14)</td>
<td>7.00 (7.60)</td>
</tr>
<tr>
<td>Highest</td>
<td>5.24 (5.64)</td>
<td>2.53 (3.04)</td>
<td>3.43 (3.49)</td>
<td>2.58 (3.17)</td>
<td>14.05 (12.43)</td>
<td>9.17 (8.40)</td>
<td>8.33 (9.19)</td>
</tr>
<tr>
<td>All quintiles</td>
<td>3.85 (4.72)</td>
<td>2.12 (2.80)</td>
<td>2.37 (2.94)</td>
<td>1.79 (2.84)</td>
<td>9.40 (10.10)</td>
<td>6.47 (6.89)</td>
<td>5.30 (7.18)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Non-core meats</th>
<th>Fats and oils</th>
<th>Dips and dressings</th>
<th>Savoury snacks</th>
<th>Confectionary and desserts</th>
<th>Cakes and biscuits</th>
<th>Non-core drinks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>4.60 (5.57)</td>
<td>1.92 (2.41)</td>
<td>2.48 (3.60)</td>
<td>3.15 (4.30)</td>
<td>10.00 (11.18)</td>
<td>6.91 (7.90)</td>
<td>6.09 (8.11)</td>
</tr>
<tr>
<td>2nd</td>
<td>4.26 (4.74)</td>
<td>1.72 (2.05)</td>
<td>2.30 (2.64)</td>
<td>2.88 (3.22)</td>
<td>10.46 (9.99)</td>
<td>5.71 (5.29)</td>
<td>5.56 (6.58)</td>
</tr>
<tr>
<td>3rd</td>
<td>5.01 (4.75)</td>
<td>2.49 (3.17)</td>
<td>2.89 (2.76)</td>
<td>3.68 (3.53)</td>
<td>12.55 (10.65)</td>
<td>7.93 (6.35)</td>
<td>7.35 (7.44)</td>
</tr>
<tr>
<td>4th</td>
<td>6.11 (5.21)</td>
<td>2.63 (2.75)</td>
<td>3.63 (3.49)</td>
<td>4.09 (3.53)</td>
<td>17.59 (13.14)</td>
<td>10.73 (8.27)</td>
<td>8.54 (8.53)</td>
</tr>
<tr>
<td>Highest</td>
<td>6.47 (6.18)</td>
<td>2.67 (2.82)</td>
<td>3.86 (3.50)</td>
<td>3.77 (3.73)</td>
<td>18.07 (13.09)</td>
<td>12.21 (9.89)</td>
<td>8.84 (8.61)</td>
</tr>
<tr>
<td>All quintiles</td>
<td>5.57 (5.38)</td>
<td>2.42 (2.78)</td>
<td>3.24 (3.28)</td>
<td>3.67 (3.61)</td>
<td>14.97 (12.43)</td>
<td>9.43 (8.23)</td>
<td>7.73 (8.09)</td>
</tr>
</tbody>
</table>

Note: Total expenditure is not adjusted for co-variates
Appendix C

Adjusted binomial logit models - detailed results
Table C1: Adjusted proportional food expenditure on all of the healthy food sub-groups across income quintiles in the main analytic sample, adjusted for confounding variables.

* p < 0.05, ** p < 0.01, *** p < 0.001

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Breads and cereals</th>
<th>Meats and alternatives</th>
<th>Core dairy foods</th>
<th>Fruit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>1.19*** (1.11, 1.29)</td>
<td>1.03 (0.95, 1.11)</td>
<td>1.16** (1.06, 1.26)</td>
<td>0.85** (0.77, 0.94)</td>
</tr>
<tr>
<td>2nd</td>
<td>1.13*** (1.06, 1.21)</td>
<td>0.99 (0.92, 1.06)</td>
<td>1.07 (0.99, 1.15)</td>
<td>0.85** (0.78, 0.92)</td>
</tr>
<tr>
<td>3rd</td>
<td>1.06* (1.01, 1.12)</td>
<td>1.03 (0.97, 1.09)</td>
<td>1.07* (1.01, 1.14)</td>
<td>0.92* (0.86, 0.99)</td>
</tr>
<tr>
<td>4th</td>
<td>1.07** (1.02, 1.13)</td>
<td>0.96 (0.91, 1.02)</td>
<td>1.00 (0.95, 1.06)</td>
<td>0.93* (0.88, 1.00)</td>
</tr>
<tr>
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<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>p for trend</td>
<td>&lt;0.001</td>
<td>0.427</td>
<td>0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vegetables</th>
<th>Potatoes</th>
<th>Vegetables</th>
<th>Total healthy foods</th>
</tr>
</thead>
<tbody>
<tr>
<td>(incl. potatoes)</td>
<td></td>
<td>(excl. potatoes)</td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td>1.08* (1.00, 1.17)</td>
<td>1.39*** (1.20, 1.61)</td>
<td>1.04 (0.96, 1.13)</td>
</tr>
<tr>
<td>2nd</td>
<td>1.05 (0.99, 1.12)</td>
<td>1.31*** (1.15, 1.49)</td>
<td>1.02 (0.95, 1.09)</td>
</tr>
<tr>
<td>3rd</td>
<td>1.02 (0.97, 1.08)</td>
<td>1.11 (0.99, 1.25)</td>
<td>1.01 (0.95, 1.08)</td>
</tr>
<tr>
<td>4th</td>
<td>1.01 (0.96, 1.06)</td>
<td>1.06 (0.96, 1.18)</td>
<td>1.01 (0.95, 1.06)</td>
</tr>
<tr>
<td>Highest</td>
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<td>1.00</td>
<td>1.00</td>
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<td>p for trend</td>
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</table>

<table>
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<th>Breads and cereals</th>
<th>Meats and alternatives</th>
<th>Core dairy foods</th>
<th>Fruit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>1.20* (1.00, 1.45)</td>
<td>0.95 (0.76, 1.19)</td>
<td>1.11 (0.87, 1.41)</td>
<td>0.87 (0.65, 1.18)</td>
</tr>
<tr>
<td>2nd</td>
<td>1.09 (0.95, 1.25)</td>
<td>1.04 (0.88, 1.22)</td>
<td>1.04 (0.89, 1.22)</td>
<td>0.88 (0.70, 1.11)</td>
</tr>
<tr>
<td>3rd</td>
<td>1.02 (0.93, 1.12)</td>
<td>0.99 (0.87, 1.12)</td>
<td>1.08 (0.96, 1.22)</td>
<td>0.79** (0.68, 0.93)</td>
</tr>
<tr>
<td>4th</td>
<td>1.04 (0.96, 1.13)</td>
<td>0.96 (0.87, 1.06)</td>
<td>0.95 (0.86, 1.05)</td>
<td>0.86* (0.76, 0.97)</td>
</tr>
<tr>
<td>Highest</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
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<td>0.925</td>
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<table>
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<th>Vegetables</th>
<th>Potatoes</th>
<th>Vegetables</th>
<th>Total healthy foods</th>
</tr>
</thead>
<tbody>
<tr>
<td>(incl. potatoes)</td>
<td></td>
<td>(excl. potatoes)</td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td>1.09 (0.89, 1.33)</td>
<td>1.37 (0.90, 2.08)</td>
<td>1.05 (0.84, 1.31)</td>
</tr>
<tr>
<td>2nd</td>
<td>1.15 (0.99, 1.34)</td>
<td>1.24 (0.89, 1.72)</td>
<td>1.13 (0.97, 1.33)</td>
</tr>
<tr>
<td>3rd</td>
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<td>1.19 (0.87, 1.64)</td>
<td>1.07 (0.94, 1.21)</td>
</tr>
<tr>
<td>4th</td>
<td>1.02 (0.93, 1.12)</td>
<td>0.97 (0.80, 1.18)</td>
<td>1.02 (0.93, 1.13)</td>
</tr>
<tr>
<td>Highest</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>p for trend</td>
<td>0.078</td>
<td>0.069</td>
<td>0.206</td>
</tr>
</tbody>
</table>

* p < 0.05, ** p < 0.01, *** p < 0.001

'adjusted for education, number of adults and children in the household and age, country of birth and social marital status of hh ref person.
Table C2: Adjusted proportional food expenditure on all of the unhealthy food sub-groups across income quintiles in the main analytic sample, adjusted for confounding variables.

* p < 0.05, ** p < 0.01, *** p < 0.001
1 adjusted for education, number of adults and children in the household and age, country of birth and social marital status of hh ref person

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Non-core meats</th>
<th>Fats and oils</th>
<th>Dips and dressings</th>
<th>Savoury snacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>1.24** [1.09, 1.42]</td>
<td>1.33*** [1.17, 1.52]</td>
<td>1.09 [0.96, 1.23]</td>
<td>1.04 [0.83, 1.29]</td>
</tr>
<tr>
<td>2nd</td>
<td>1.18** [1.06, 1.32]</td>
<td>1.26*** [1.12, 1.41]</td>
<td>0.99 [0.89, 1.10]</td>
<td>1.13 [0.98, 1.30]</td>
</tr>
<tr>
<td>3rd</td>
<td>1.03 [0.94, 1.13]</td>
<td>1.19** [1.07, 1.33]</td>
<td>1.07 [0.98, 1.17]</td>
<td>1.19** [1.05, 1.34]</td>
</tr>
<tr>
<td>4th</td>
<td>1.07 [0.98, 1.16]</td>
<td>1.21*** [1.10, 1.34]</td>
<td>1.08 [1.00, 1.18]</td>
<td>1.14** [1.03, 1.25]</td>
</tr>
<tr>
<td>Highest</td>
<td>1.00</td>
<td>-</td>
<td>1.00</td>
<td>-</td>
</tr>
<tr>
<td>p for trend</td>
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<td>&lt;0.001</td>
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</table>

<table>
<thead>
<tr>
<th>Confectionary and desserts</th>
<th>Cakes and biscuits</th>
<th>Non-core drinks</th>
<th>Total unhealthy foods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>0.98 [0.88, 1.08]</td>
<td>1.04 [0.94, 1.16]</td>
<td>0.74*** [0.62, 0.88]</td>
</tr>
<tr>
<td>2nd</td>
<td>1.00 [0.92, 1.08]</td>
<td>1.02 [0.93, 1.11]</td>
<td>0.97 [0.84, 1.13]</td>
</tr>
<tr>
<td>3rd</td>
<td>0.97 [0.90, 1.04]</td>
<td>1.02 [0.94, 1.11]</td>
<td>0.98 [0.87, 1.10]</td>
</tr>
<tr>
<td>4th</td>
<td>1.08* [1.01, 1.15]</td>
<td>1.06 [0.99, 1.14]</td>
<td>1.00 [0.90, 1.10]</td>
</tr>
<tr>
<td>Highest</td>
<td>1.00</td>
<td>-</td>
<td>1.00</td>
</tr>
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<td>p for trend</td>
<td>0.279</td>
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</table>

<table>
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<th>Non-core meats</th>
<th>Fats and oils</th>
<th>Dips and dressings</th>
<th>Savoury snacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>1.18 [0.91, 1.53]</td>
<td>1.56** [1.16, 2.10]</td>
<td>1.09 [0.81, 1.46]</td>
<td>1.12 [0.80, 1.58]</td>
</tr>
<tr>
<td>2nd</td>
<td>1.19 [0.94, 1.52]</td>
<td>1.31* [1.02, 1.68]</td>
<td>1.13 [0.91, 1.41]</td>
<td>1.04 [0.83, 1.30]</td>
</tr>
<tr>
<td>3rd</td>
<td>1.03 [0.87, 1.21]</td>
<td>1.36** [1.12, 1.66]</td>
<td>1.07 [0.92, 1.25]</td>
<td>1.16 [0.97, 1.39]</td>
</tr>
<tr>
<td>4th</td>
<td>1.08 [0.93, 1.25]</td>
<td>1.22* [1.04, 1.42]</td>
<td>1.11 [0.95, 1.28]</td>
<td>1.10 [0.95, 1.28]</td>
</tr>
<tr>
<td>Highest</td>
<td>1.00</td>
<td>-</td>
<td>1.00</td>
<td>-</td>
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<td>p for trend</td>
<td>0.185</td>
<td>0.002</td>
<td>0.365</td>
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</table>

<table>
<thead>
<tr>
<th>Confectionary and desserts</th>
<th>Cakes and biscuits</th>
<th>Non-core drinks</th>
<th>Total unhealthy foods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>0.90 [0.71, 1.14]</td>
<td>1.04 [0.81, 1.33]</td>
<td>1.09 [0.81, 1.46]</td>
</tr>
<tr>
<td>2nd</td>
<td>0.94 [0.79, 1.12]</td>
<td>0.88 [0.74, 1.05]</td>
<td>1.03 [0.78, 1.37]</td>
</tr>
<tr>
<td>3rd</td>
<td>0.92 [0.81, 1.04]</td>
<td>0.93 [0.81, 1.06]</td>
<td>1.02 [0.85, 1.23]</td>
</tr>
<tr>
<td>4th</td>
<td>1.08 [0.97, 1.20]</td>
<td>0.98 [0.87, 1.10]</td>
<td>1.04 [0.87, 1.23]</td>
</tr>
<tr>
<td>Highest</td>
<td>1.00</td>
<td>-</td>
<td>1.00</td>
</tr>
<tr>
<td>p for trend</td>
<td>0.117</td>
<td>0.452</td>
<td>0.716</td>
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</table>

Percentage change in grocery expenditure relative to the highest income quintile
Exponentiated beta coefficient [95% confidence interval]
Appendix D

Recruitment flyer for qualitative study
We are currently looking for Mums in [ ] who are happy to participate in a short interview about what it is really like to buy food for their families.

Feeding Your Family is a study being conducted in the [ ] area by a small research team from Deakin University. It aims to understand how different families make decisions when buying family food.

All Mums who are interviewed will receive a gift card from a major retailer to compensate for their time.

If ....
- You are female and the main food shopper in your household
- Your household has two parents and at least one child of primary school age (Prep–Year 6)
- You live in the [ ] area

you may be eligible to take part in this study.

Participation in the study will involve a one-to-one interview that will last 1–1.5 hrs to be held at a time and place that is best for you. We will be making an audio recording of the interview, if you give your permission.

If needed, some assistance with childcare is available [below school age].

If you are interested in participating in Feeding Your Family or would like further information please contact Gina at [ ] or via email at feedingyourfamily@deakin.edu.au

We are hoping to talk to a diverse range of Mums, so when you contact us we may ask you a few other questions about you and your family.
Appendix E

Interview schedule
Section 1 (Preamble- notes for interviewer)

Thanks and introduction

Thankyou for taking time to participate, I really appreciate the contribution that your particular perspective will make to my study.

The main purpose of the interview today is to explore your experiences of buying food for your family and the different things that you have to consider when making decisions around what you will purchase.

My role- I am the main investigator of this project, and the interview will make up a significant part of my studies towards a PhD degree. I have several supervisors, the main one is Dr Cate Burns, and you are welcome to contact her if you have any concerns.

A few things about the interview:

As parent, you are an expert … I don’t have any experience of what this is like, so the best thing you can do tell me what it is REALLY like for you.

There are no right an wrong answers, and I’m not focussed on whether you buy ‘good’ foods or ‘bad’ foods as such (I’m not judging you on what you buy) - I’m most interested in why the foods you do choose are good options for your family.

There might be some silly questions. Sometimes I might try to get you to explain something that seems obvious to you. This is usually to make it clear exactly what you think/mean – I don’t want to make any assumptions.

Confidentiality

Before we begin, lets go through the participant information forms.

Structure of the interview

1) I’ll get you to tell me a bit about your family, and your usual experiences when shopping for food. (30 mins)
2) I’ll bring out some pictures related to food shopping and use them to prompt some further discussion (20 mins)
3) I’ll collect some more standard information about you and your family (5 mins)

I’ll give you the gift voucher and some information about services in the area at the end of the interview.

If there is anything at any time that you are not comfortable talking about or questions you don’t want to answer please feel free to tell me and we can move on to the next section. You are free to stop the interview at any time.
Section 2- Interview schedule

Introduction
Can you describe who lives in your household?

Names? Ages? School level?

Supermarket run through
Can you describe for me the foods you would buy on a ‘usual’ shopping trip. You can structure this however you like- perhaps in the way that you walk through the supermarket or order in which you visit shops, or the way in which you make a shopping list.

Prompts include:

What is it about those items that make you buy them?
Can you explain some of your thinking in making those choices?
Are there some foods in this section that you only buy occasionally or never?

Photograph section
Can you tell me what you think about what types of shoppers they might be, or perhaps what they and their families are like?

Note- Saying what you think may feel uncomfortable, as usually we would keep these thoughts to ourselves -commenting about other people can feel rude and judgemental- but I am interested in your perceptions

Who are they? What are they like? What makes you think that?
Do you know someone who might have a trolley like that?

Are any of these trolleys a bit like yours? Why or why not?

Eating out or take-away
We have focussed mainly on food bought for eating at home, do you often get to eat out, or even buy take-away food?

Happy with purchases?
Some Mums happy with what they buy, others not so much. How about you- how do you feel about what you buy?

Value for money
Can you tell me a bit more about what ‘value’ means to you when food shopping?

That’s all my questions… is there anything else that you’d like to add?

END OF INTERVIEW
Major food groups for interviewer to cover in supermarket run through:

**Groceries**
- Breakfast
- Canned foods- processed fruit and vege
- Confectionary/treats
- Desserts
- Drinks
- Jams and spreads
- Packet mixes or cooking sauces
- Pasta, rice and noodle
- Sauces/oils/condiments
- Snack foods (Chips nuts, biscuits, muesli bars, cakes)
- Frozen foods- (processed meats, ready meals, vegetables, desserts)
- Packaged meals

**Fresh foods:**
- Dairy foods (Milk cheese other)
- Butter/marg
- Fresh fruits and vege
- Meat
- Eggs
- Deli section
- Bread /bakery

**Other foods:**
- Baby food?
- Health foods?
- Organic?
Appendix F

Background information form for qualitative interviews
Household information form

Participant ID

1. Ages of household members
   Adult 1 _____ Adult 2 _____ Other adults _______
   Child 1 _____ Child 2 _____ Child 3 _____ Child 4 _____ Other children _____

2. In which country were you born? ________________________________

3. Is a language other than English spoken in your home?
   If yes, which language/s ________________________________

4. How would you best describe your ethnicity? ________________________________

5. Have you completed any study since leaving school?
   ☐ No further study ☐ Apprenticeship/certificate  ☐ Diploma  ☐ Bachelor/higher degree
   Has your partner completed any study since leaving school?
   ☐ No further study ☐ Apprenticeship/certificate  ☐ Diploma  ☐ Bachelor/higher degree

6. Which of the following best describes your current employment?
   ☐ Employed full-time
   ☐ Employed part-time
   ☐ In receipt of government benefits
   ☐ Home duties
   ☐ Other – please describe ________________________________
   What is your usual occupation? ________________________________

7. Which of the following best describes your partner’s current employment?
   ☐ Employed full-time
   ☐ Employed part-time
   ☐ Pensioner/in receipt of government benefits
   ☐ Home duties
   ☐ Other – please describe ________________________________
   What is their usual occupation? ________________________________

8. Which of the following best describes your housing situation?
   ☐ Renting- private
   ☐ Renting- gov’t
   ☐ Owner with mortgage
   ☐ Owner without mortgage
   ☐ Other – please describe ________________________________
9. How much do you usually spend on all the food required to feed your family?
   At home $__________ (Weekly/fortnightly)
   Away from home $__________ (Weekly/fortnightly)

10. Level of weekly disposable household income (weekly/fortnightly)

   Weekly after tax (fortnightly) OR Yearly before tax
   ❑ Less than $1015/week ($2030) ❑ Less than $58 000 per year
   ❑ $1016-1350/week ($2031 – 2700) ❑ $58 001 - 80 000 per year
   ❑ $1351-1600/week ($2701 – 3200) ❑ $80 001 - 100 000 per year
   ❑ $1601- 2000/week ($3201 - $4000) ❑ $100 001 - $130 000 per year
   ❑ more than $2000/week ($4000) ❑ more than $130 000 per year

11. Primary source of household income:
   ❑ Wage/salary ❑ Own business ❑ Government payments/allowances ❑ Other:
      __________________________

12. For ‘most’ weeks, does your household:
   ❑ Spend more than it earns ❑ Break even ❑ Manage to save some money

13. Do you regularly purchase or read any magazines or newspapers?
   If yes, which ones?
      __________________________
      __________________________

14. For how long is the television usually switched on in your household?
   ❑ less than 1 hour per day
   ❑ 1-2 hours per day
   ❑ 2 - 4 hours per day
   ❑ 4 hours or more per day

   Which shows are regularly watched?
      __________________________
      __________________________
      __________________________

15. What kind of cultural or leisure activities do you and your family do? eg: go to
    cinema, sport, museum, shows etc (Please indicate how often)
      __________________________
      __________________________
      __________________________
Appendix G

Shopping lists for trolley photographs
### Table G1: Itemised shopping list for Trolley A

<table>
<thead>
<tr>
<th>Food item</th>
<th>Units</th>
<th>Unit price ($)</th>
<th>Total price ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breakfast foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-cream milk - <em>Pura</em></td>
<td>1</td>
<td>3.43</td>
<td>3.43</td>
</tr>
<tr>
<td>Bananas</td>
<td>3</td>
<td>0.58</td>
<td>1.74</td>
</tr>
<tr>
<td><strong>Lunch foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sourdough bread stick - <em>In-store bakery</em></td>
<td>1</td>
<td>2.25</td>
<td>2.25</td>
</tr>
<tr>
<td>Roast chicken - <em>Safeway deli</em></td>
<td>1</td>
<td>9.98</td>
<td>9.98</td>
</tr>
<tr>
<td>Mayonnaise - <em>Praise</em></td>
<td>1</td>
<td>3.89</td>
<td>3.89</td>
</tr>
<tr>
<td>Spreadable butter - <em>Lurpack</em></td>
<td>1</td>
<td>3.99</td>
<td>3.99</td>
</tr>
<tr>
<td><strong>Dinner foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-prepared beef lasagne - <em>Pasta Master</em></td>
<td>1</td>
<td>11.39</td>
<td>11.39</td>
</tr>
<tr>
<td>Garlic bread - <em>Homebrand</em></td>
<td>1</td>
<td>3.29</td>
<td>3.29</td>
</tr>
<tr>
<td>Pre-packaged baby spinach</td>
<td>1</td>
<td>2.96</td>
<td>2.96</td>
</tr>
<tr>
<td>Cherry tomatoes</td>
<td>1</td>
<td>2.00</td>
<td>2.00</td>
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<tr>
<td><strong>Snacks foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheese twists classic cheddar - <em>Waterthins</em></td>
<td>1</td>
<td>3.69</td>
<td>3.69</td>
</tr>
<tr>
<td>LCMs - <em>Kelloggs</em></td>
<td>1</td>
<td>3.99</td>
<td>3.99</td>
</tr>
<tr>
<td>Biscuit and cheese snacks - <em>Arnotts Le snak</em></td>
<td>1</td>
<td>4.59</td>
<td>4.59</td>
</tr>
<tr>
<td><strong>Desserts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premium vanilla bean icecream - <em>Weis</em></td>
<td>1</td>
<td>7.75</td>
<td>7.75</td>
</tr>
<tr>
<td>Apple crumble - <em>Sarah Lee</em></td>
<td>1</td>
<td>5.38</td>
<td>5.38</td>
</tr>
<tr>
<td><strong>Other drinks</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chocolate milk - <em>Big M</em></td>
<td>1</td>
<td>5.75</td>
<td>5.75</td>
</tr>
<tr>
<td><strong>Total cost of Trolley A</strong></td>
<td></td>
<td></td>
<td><strong>83.06</strong></td>
</tr>
</tbody>
</table>
Table G2: Itemised shopping list for Trolley B

<table>
<thead>
<tr>
<th>Food item</th>
<th>Units</th>
<th>Unit price ($)</th>
<th>Total price ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breakfast foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-cream milk - Coles Smart Buy</td>
<td>1</td>
<td>3.16</td>
<td>3.16</td>
</tr>
<tr>
<td>Coco Pops - Kelloggs (750g)</td>
<td>1</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Peanut butter - Dick Smith brand</td>
<td>1</td>
<td>3.25</td>
<td>3.25</td>
</tr>
<tr>
<td><strong>Lunch foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White bread - In-store bakery</td>
<td>1</td>
<td>2.95</td>
<td>2.95</td>
</tr>
<tr>
<td>Strassburg - Primo</td>
<td>1</td>
<td>5.68</td>
<td>5.68</td>
</tr>
<tr>
<td>Tomato sauce - Heinz</td>
<td>1</td>
<td>2.29</td>
<td>2.29</td>
</tr>
<tr>
<td>Vegemite</td>
<td>1</td>
<td>3.36</td>
<td>3.36</td>
</tr>
<tr>
<td>Margerine - Coles Smart Buy</td>
<td>1</td>
<td>1.34</td>
<td>1.34</td>
</tr>
<tr>
<td><strong>Dinner foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frozen chips - You'll Love Coles</td>
<td>1</td>
<td>2.89</td>
<td>2.89</td>
</tr>
<tr>
<td>Sausages, thin BBQ - You'll Love Coles</td>
<td>1</td>
<td>3.43</td>
<td>3.43</td>
</tr>
<tr>
<td>Frozen peas and corn - Birds Eye</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Brown onion gravy mix - Gravox</td>
<td>1</td>
<td>3.09</td>
<td>3.09</td>
</tr>
<tr>
<td><strong>Snacks foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multipack chips (20) - Smiths</td>
<td>1</td>
<td>6.88</td>
<td>6.88</td>
</tr>
<tr>
<td>Oatmeal biscuits - Paradise</td>
<td>1</td>
<td>1.51</td>
<td>1.51</td>
</tr>
<tr>
<td>Red delicious apples</td>
<td>2</td>
<td>0.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Granny smith apples</td>
<td>2</td>
<td>1.05</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Desserts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frozen Cheesecake - Coles Smart Buy</td>
<td>1</td>
<td>2.99</td>
<td>2.99</td>
</tr>
<tr>
<td><strong>Other drinks</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coke zero - Coca-cola</td>
<td>1</td>
<td>3.3</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Total cost of Trolley B</strong></td>
<td></td>
<td></td>
<td>60.12</td>
</tr>
</tbody>
</table>
Table G3: Itemised shopping list for Trolley C

<table>
<thead>
<tr>
<th>Food item</th>
<th>Units</th>
<th>Unit price ($</th>
<th>Total price ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breakfast foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soy milk - Vitasoy</td>
<td>1</td>
<td>2.88</td>
<td>2.88</td>
</tr>
<tr>
<td>Weetbix - Sanitarium</td>
<td>1</td>
<td>6.11</td>
<td>6.11</td>
</tr>
<tr>
<td>Honey - Beekeepers choice</td>
<td>1</td>
<td>5.49</td>
<td>5.49</td>
</tr>
<tr>
<td><strong>Lunch foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wholegrain bread - Lawsons</td>
<td>1</td>
<td>5.3</td>
<td>5.3</td>
</tr>
<tr>
<td>Small cans flavoured tinned tuna - Greenseas</td>
<td>2</td>
<td>1.39</td>
<td>2.78</td>
</tr>
<tr>
<td>Lettuce</td>
<td>1</td>
<td>1.99</td>
<td>1.99</td>
</tr>
<tr>
<td>Truss tomatoes</td>
<td>1</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td><strong>Dinner foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singapore noodles - Wokka</td>
<td>1</td>
<td>3.53</td>
<td>3.53</td>
</tr>
<tr>
<td>Chicken breast 500g</td>
<td>1</td>
<td>9.7</td>
<td>9.7</td>
</tr>
<tr>
<td>Honey soy stir-fry sauce - Kikkoman</td>
<td>1</td>
<td>3.52</td>
<td>3.52</td>
</tr>
<tr>
<td>Rice bran oil - Alfa one</td>
<td>1</td>
<td>4.45</td>
<td>4.45</td>
</tr>
<tr>
<td>Onion</td>
<td>4</td>
<td>0.37</td>
<td>1.48</td>
</tr>
<tr>
<td>Capsicum</td>
<td>1</td>
<td>1.45</td>
<td>1.45</td>
</tr>
<tr>
<td>Broccolini</td>
<td>1</td>
<td>2.99</td>
<td>2.99</td>
</tr>
<tr>
<td>Carrots</td>
<td>2</td>
<td>0.32</td>
<td>0.64</td>
</tr>
<tr>
<td><strong>Snacks foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cruskits (Rye) - Arnotts</td>
<td>1</td>
<td>3.06</td>
<td>3.06</td>
</tr>
<tr>
<td>Vegemite</td>
<td>1</td>
<td>3.36</td>
<td>3.36</td>
</tr>
<tr>
<td>Multipack sultanas - Sunbeam</td>
<td>1</td>
<td>3.27</td>
<td>3.27</td>
</tr>
<tr>
<td>Pears</td>
<td>1</td>
<td>3.67</td>
<td>3.67</td>
</tr>
<tr>
<td>Grapes</td>
<td>1</td>
<td>5.71</td>
<td>5.71</td>
</tr>
<tr>
<td><strong>Desserts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frozen mixed berries - Creative gourmet</td>
<td>1</td>
<td>6.99</td>
<td>6.99</td>
</tr>
<tr>
<td>Honey/cinnamon yoghurt - King Island dairy</td>
<td>1</td>
<td>3.99</td>
<td>3.99</td>
</tr>
<tr>
<td>Milk chocolate - Cadbury</td>
<td>1</td>
<td>4.33</td>
<td>4.33</td>
</tr>
<tr>
<td><strong>Other drinks</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange juice - Sunzest organic</td>
<td>1</td>
<td>5.69</td>
<td>5.69</td>
</tr>
<tr>
<td><strong>Total cost of Trolley C</strong></td>
<td></td>
<td></td>
<td>96.68</td>
</tr>
<tr>
<td>Table G4: Itemised shopping list for Trolley D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Food item</strong> &amp; <strong>Units</strong></td>
<td><strong>Unit price ($)</strong></td>
<td><strong>Total price ($)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Breakfast foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-fat milk - Farmdale (Aldi)</td>
<td>1</td>
<td>2.57</td>
<td>2.57</td>
</tr>
<tr>
<td>Quick oats - Goldenvale (Aldi)</td>
<td>1</td>
<td>0.99</td>
<td>0.99</td>
</tr>
<tr>
<td>Strawberry Jam - Aldi</td>
<td>1</td>
<td>1.99</td>
<td>1.99</td>
</tr>
<tr>
<td><strong>Lunch foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multigrain bread - Bakers life (Aldi)</td>
<td>1</td>
<td>2.99</td>
<td>2.99</td>
</tr>
<tr>
<td>Light cheddar cheese - Westacre (Aldi)</td>
<td>1</td>
<td>4.79</td>
<td>4.79</td>
</tr>
<tr>
<td>Ham - Courtway (Aldi)</td>
<td>1</td>
<td>4.29</td>
<td>4.29</td>
</tr>
<tr>
<td><strong>Dinner foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spaghetti, Organic - Remano (Aldi)</td>
<td>1</td>
<td>1.99</td>
<td>1.99</td>
</tr>
<tr>
<td>Minced meat extra lean - Aldi</td>
<td>1</td>
<td>5.99</td>
<td>5.99</td>
</tr>
<tr>
<td>Canned tomatoes - Carloni (Aldi)</td>
<td>1</td>
<td>0.75</td>
<td>0.75</td>
</tr>
<tr>
<td>Olive oil - Colavita</td>
<td>1</td>
<td>7.59</td>
<td>7.59</td>
</tr>
<tr>
<td>Carrots</td>
<td>1</td>
<td>0.99</td>
<td>0.99</td>
</tr>
<tr>
<td>Zucchini</td>
<td>1</td>
<td>2.79</td>
<td>2.79</td>
</tr>
<tr>
<td>Onion</td>
<td>1</td>
<td>1.99</td>
<td>1.99</td>
</tr>
<tr>
<td><strong>Snacks foods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BBQ Rice crackers - Damora (Aldi)</td>
<td>1</td>
<td>1.49</td>
<td>1.49</td>
</tr>
<tr>
<td>Cereal bars - Hillcrest (Aldi)</td>
<td>1</td>
<td>2.99</td>
<td>2.99</td>
</tr>
<tr>
<td>Oranges</td>
<td>2</td>
<td>1.3</td>
<td>2.6</td>
</tr>
<tr>
<td>Bananas</td>
<td>3</td>
<td>0.58</td>
<td>1.74</td>
</tr>
<tr>
<td><strong>Desserts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chocolate dairy desserts - Stampede (Aldi)</td>
<td>1</td>
<td>5.49</td>
<td>5.49</td>
</tr>
<tr>
<td><strong>Other drinks</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange Juice - Solessta (Aldi)</td>
<td>1</td>
<td>3.49</td>
<td>3.49</td>
</tr>
<tr>
<td><strong>Total cost of Trolley D</strong></td>
<td></td>
<td><strong>57.51</strong></td>
<td></td>
</tr>
</tbody>
</table>
Appendix H

Plain language statement and consent form
Plain Language Statement

Date:

Full Project Title: Feeding Your Family: unpacking food shopping decisions

Principal Researcher: Dr Cate Burns

Student Researcher: Ms Gina Harris

This Plain Language Statement and Consent Form is 6 pages long. Please make sure you have all the pages.

1. Your Consent
You are invited to take part in the “Feeding Your Family” research project

This Plain Language Statement contains detailed information about the research project. Its purpose is to explain to you as openly and clearly as possible all the procedures involved in this project so that you can make a fully informed decision whether you are going to participate.

Please read this Plain Language Statement carefully. Feel free to ask questions about any information in the document. You may also wish to discuss the project with a relative or friend or your local health worker. Feel free to do this.

Once you understand what the project is about and if you agree to take part in it, you will be asked to sign the Consent Form. By signing the Consent Form, you indicate that you understand the information and that you give your consent to participate in the research project.

You will be given a copy of the Plain Language Statement and Consent Form to keep as a record.

2. Purpose and Background
Previous experience has shown that food shopping decisions are very complex, and competing considerations can make the food choice process quite difficult for parents/carers of children, with parents sometimes making choices that they are not entirely happy with.

The purpose of this project is to improve our understanding of the competing considerations that parents/carers of primary school children face when buying food for their families. Interviews are being conducted with a broad range of people in different areas across Melbourne. It is hoped that the knowledge gained from this research project can assist in developing new ways to support parents/carers in making the best food choices they can for themselves and their families.

It is expected that between 16 and 30 people will participate in this project.

You are invited to participate in this research project because you have indicated that you do most of the food shopping for your family, and that your family includes two parents and at
least one child of primary school age. You also live in one of the areas of Melbourne from which we are recruiting participants.

The results of this research may be used to help Gina Harris to obtain a Doctor of Philosophy degree.

3. **Funding**

This research is wholly funded by Deakin University.

4. **Procedures**

Participation in this project will involve one interview that will last between 1 and 1½ hours. These interviews will take place in a neutral location close to your home, at a time convenient to you. With your permission, an audio recording will be made of the interview as this assists the researcher greatly in the analysis of your responses to the interview questions.

5. **Possible Benefits**

The findings of this study may be used to design future programs or policies that may assist in making food choices easier for parents. Possible benefits to the participants include the opportunity to reflect on your shopping decisions and to know that you are making a contribution to research.

We cannot guarantee or promise that you will receive any benefits from this project.

6. **Possible Risks**

Possible risks of this study include the potential for mild emotional stress due to the need to disclose some personal information about yourself and your family. The types of questions most likely to cause this stress are those about income, occupation and ethnic identity. The researcher will make it clear when approaching this section of the interview, and will remind you then that you may choose not to answer any question/s that you feel may cause you any form of stress.

You are free to stop the interview at anytime should you feel distressed in anyway, or for any other reason. The contact details of both local and national/anonymous counselling services will be provided to all participants on completion of the interview. These services can be contacted to seek help with any personal or financial worries that may have been brought up during the interview.

There may be additional unforeseen or unknown risks.

7. **Privacy, Confidentiality and Disclosure of Information**

All information gathered in the interviews will be stored in locked filing cabinets at Deakin University or in the case of computer files, in password protected files on the researcher’s computer at Deakin University. Participants may be able to be identified from the content of the interview recording. Identity codes, rather than names will be used to label all other interview information (transcripts of the interview and responses to personal information questions). Pseudonyms for all person and place names will be used to protect the identity of all participants and their families during the interview transcription process. If desired, participants are able to see a copy of the interview transcript in order to check the accuracy
of this information and that their identity is sufficiently protected. You are asked to indicate whether you would like to see your transcript on the consent form attached.

Completed consent forms, household information and other interview responses will all be stored in separate places. All data will be stored at Deakin University for 6 years after the final publication of the study results. All information will be destroyed after this time period.

Any information obtained in connection with this project and that can identify you will remain confidential, and will only be accessed by members of the research team. It will only be disclosed with your permission, subject to legal requirements. If you give us your permission by signing the Consent Form, we plan to share and discuss the overall results of the project with people working in other academic, government, non-government or other health-related organisations, and to disseminate the findings more broadly via journal publications and presentations at conferences.

In any publication, information will be provided in such a way that you cannot be identified. Pseudonyms will be ALWAYS be used for the names of people and places mentioned in any publication. Information describing the overall the circumstances of participants (income, education status etc) will always be presented at a group level. Quotes may be used in publications to demonstrate ideas expressed by participants. If these ideas are typical of other participants with similar characteristics, then details of the relevant characteristics of that participant may be attached to the quote, for example – “Mary”, Area “A”, mother of four

8. Results of Project
A brief report outlining the results of this project will be posted to participants who indicate on the day of the interview that they would like to receive this information. It is anticipated that the results of this study will be published more formally as part of Gina Harris’s PhD Thesis, other articles in academic journals and may be used in presentations made at conferences or other meetings.

9. Participation is Voluntary
Participation in any research project is voluntary. If you do not wish to take part you are not obliged to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage on the day of the interview. You are also free to withdraw up to 4 weeks after the interview. In the case that you have indicated you would like to view the transcript of the interview, you can withdraw at any time up to 2 weeks after the transcript has been sent to you. Any information obtained from you up to the time of withdrawal will not be used, but will be stored with the rest of the project files, unless you specifically indicate that you are happy for some or all of your information to be used.

Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship with Deakin University.

Before you make your decision, a member of the research team will be available to answer any questions you have about the research project. You can ask for any information you want. Sign the Consent Form only after you have had a chance to ask your questions and have received satisfactory answers.

If you decide to withdraw from this project, please notify a member of the research team or complete and return the Revocation of Consent Form attached. This notice will allow the research team to inform you if there are any health risks or special requirements linked to withdrawing.
10. Ethical Guidelines

This project will be carried out according to the *National Statement on Ethical Conduct in Human Research* (2007) produced by the National Health and Medical Research Council of Australia. This statement has been developed to protect the interests of people who agree to participate in human research studies.

11. Complaints

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about your rights as a research participant, then you may contact **Secretary HEAG-H, Dean’s Office, Faculty of Health Medicine, Nursing and Behavioural Sciences, 221 Burwood Highway, Burwood Victoria 3125**, Telephone: 9251 7174, Email hmnbs-research@deakin.edu.au

Please quote project number **HEAG-H 134/09**

12. Reimbursement for your costs

You will not be paid for your participation in this project. However, you will be given a $20 Coles/Myer gift voucher to compensate for your time and any travel costs. An additional $10 voucher will be given for each child under school age that requires childcare during the interview period. (Mothers are welcome to bring young infants to the interview.)

13. Further Information, Queries or Any Problems

If you require further information, wish to withdraw your participation or if you have any problems concerning this project (for example, any side effects), you can contact Dr Cate Burns (principal researcher) or Gina Harris (associate researcher).

**Dr Cate Burns**

Public Health Research Cluster  
Building F, Level 2  
Deakin University  
221 Burwood Highway  
Burwood VIC 3125

Tel: 03 9251 XXXX  
Fax: 03 9244 XXXX  
Email: XXXXX@deakin.edu.au

**Ms Gina Harris**

Public Health Research Cluster  
c/o Building F, Level 2  
Deakin University  
221 Burwood Highway  
Burwood VIC 3125

Tel: XXXX XXX XXX  
Email: XXXXX@deakin.edu.au
**DEAKIN UNIVERSITY**  
**PLAIN LANGUAGE STATEMENT AND CONSENT FORM**  

**TO: Participants**

<table>
<thead>
<tr>
<th>Consent Form</th>
</tr>
</thead>
</table>

**Date:**

**Full Project Title:** Feeding your family: unpacking food shopping decisions

---

I have read, or have had read to me, and I understand the attached Plain Language Statement.

I freely agree to participate in this project according to the conditions in the Plain Language Statement.

I have been given a copy of the Plain Language Statement and Consent Form to keep.

I agree that (please circle):

1) I DO/ DO NOT consent for an audio recording to be made of this interview

2) I WOULD/ WOULD NOT like to view a copy of the transcript of this interview prior to its inclusion in the final analysis

3) I WOULD/ WOULD NOT like a report of the results of this study to be sent to me on completion of this project

The researcher has agreed not to reveal my identity and personal details, including where information about this project is published, or presented in any public form.

---

Participant’s Name (printed) ……………………………………………………………………

Signature ……………………………………………………… Date  ……………………. 

332
TO: Participants

**Revocation of Consent Form**

*(To be used for participants who wish to withdraw from the project)*

**Date:**

**Full Project Title:** Feeding your family: understanding food shopping decisions

I hereby wish to WITHDRAW my consent to participate in the above research project and understand that such withdrawal WILL NOT jeopardise my relationship with Deakin University.

Please select the type of withdrawal of consent:

- [ ] I do not want ANY of the information I have provided up to this point to be used in the data analysis
  OR
- [ ] I do not want PART of the information I have provided up to this point to be used in the data analysis. The part I do not want to be used is outlined below, all other information may be used in the data analysis.

Please remove information about:

___________________________________________________________________
___________________________________________________________________

OR

- [ ] I am happy for ALL of the information I have provided up to this point to be used in the data analysis

Participant’s Name (printed) .................................................................

Signature ................................................................. Date .................

**Please mail or fax this form to:**

Dr Cate Burns  
Public Health Research Cluster  
Building F, Level 2  
Deakin University  
221 Burwood Highway  
Burwood VIC 3125

Tel: 03 9251 XXXX  
Fax: 03 9244 XXXX  
Email: XXXX@deakin.edu.au
Dear PARTICIPANT,

Thanks once again for participating in the Feeding Your Family study. I really enjoyed our discussion and your experiences, opinions and stories will make a valuable contribution to my research project.

Please find attached a copy of the transcript that I have made from the audio recording of our discussion.

A few things to note:

- **Name changes:** I have changed your name, together with those of your family members and the places that you referred to during the interview- I haven’t sent the wrong transcript! This is all done to maintain your privacy. If you feel that someone may be able to recognise you from other things still in the transcript, please let me know and we can work out a way to solve this. Keep in mind it is only short quotes that may be used in any reports of the results.

- **New experience:** It can be quite strange reading a transcript of how you speak as all the ‘umms’ and ‘ahhs’ and ‘you knows’ are written down. Be assured everyone’s speech looks strange- I am just getting used to it myself!

- **Your contribution at this stage:** I have tried to capture everything that was said in our discussion. I have sent this to you so that you can read it for your own interest, but also so that you check the accuracy of the transcript- that is, check that I have recorded our conversation correctly, without missing anything or adding extra things. Due to the large volume of typing and re-reading involved in this project, there may still be the odd typographical error that I have missed. Please don’t worry about punctuation errors or the occasional spelling error- these will be corrected if a quote is used in a report. The most important thing is to check that you feel this is an accurate record of our discussion.

- **Other concerns:** I would hope that you are still happy to have all parts of our conversation available for inclusion in the study as it is all very valuable to me. If for some reason there is something that on reflection you would prefer me not to include, please contact me - I am happy to discuss this, and remove any section that you feel is not appropriate.

Otherwise, happy reading!

Please contact me about any corrections or issues you would like to discuss. You can make notes and return the transcript to me in the post, via email or we can discuss it over the phone. If I don’t hear from you within TWO WEEKS of sending this out to you, I will need to assume that there are no problems and will use the transcript in the current form.

Thanks once again for your participation and interest in this study.

Kind regards,

Gina Bilenkij
PhD Candidate
Deakin University
Appendix J

Summary of descriptive results for participants
Who we spoke to...

Between February and October of 2010, we interviewed 22 mums from the Melbourne area. Half the participants lived in an outer suburban area, and the other half lived in a ‘middle ring’ suburban area.

All participants had at least one child of primary school age, and lived with a partner or husband.

We spoke with mums from a wide variety of families in terms of the number of children at home and the ages of the children. Participants also had a diverse range of life and work experiences, cultural backgrounds and lived in households with both high and low incomes.

This project wouldn’t have been possible without the mums who took part, so once again, we’d like to thank each and every one of you for your contribution.

Further contact

The main researcher (Gina) will be on maternity leave between approximately July 2011 and December 2011. Gina will aim to check her email fortnightly during this time.

If you have any queries or concerns about this research, please contact Gina via email at gina.harris@deakin.edu.au or by mail (address below).

For any urgent enquiries, please contact our receptionist Amy on 9251 7145 and ask to leave a message for Gina or Dr Helen Mavoa.

Feeding your family
Research update
July 2011

Gina Harris
Feeding your family
Deakin Population Health
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Deakin University
213 Burwood Hwy
Burwood, Victoria 3125

Deakin University CRICOS Provider Code: 00113B
Aim of the study

The Feeding your family study aimed to get a 'real' picture of the range of things that influence the food shopping choices made by families in Melbourne. We aimed to do this by speaking to local mums from a diverse range of backgrounds.

Because the 'cost of living' is currently a major issue for many Australian families, this project particularly focused on understanding how parents in different financial situations balanced all the things they need to think about when choosing food for their families.

It's important to note that we did not think about our participants' food choices in terms of being 'right' or 'wrong' – we were interested in understanding how and why different families made decisions that were right for them.

The story so far...

The main things that participants thought about when buying foods were:

- The food itself: Everyone discussed the price and quality of food items, how long items would last, how they would fit with the family's routines and how acceptable they were to different family members.
- Issues around buying, cooking and eating foods: Mums had to balance things like 'getting a good deal' and time/convenience with other things like trying to choose healthy foods and ensuring everyone enjoyed the foods provided.
- Responsibilities around buying food: All mums discussed their sense of responsibility when buying foods for their families. Important things included balancing food spending with other household demands, keeping the family happy and healthy through food choices and establishing good habits for the future.

The next steps

The next part of this research project will be to take a deeper look at the way our participant group spoke about different aspects of their responsibilities around foods.

As the cost of different foods was an important consideration for all mums in our study, we are particularly interested in looking at how ideas about making 'wise' shopping decisions in terms of cost were balanced with the other responsibilities mums talked about when shopping for food like keeping the family happy and providing healthy foods.

We are very excited about this next stage, and hope to keep you updated on the progress of the study in 2012.
Appendix K

Evidence to support the judgements made around participants’ levels of resources
Table K1: Estimated levels of participants’ resources and evidence to support the judgments made

<table>
<thead>
<tr>
<th>Participant</th>
<th>Estimated Level of financial resources</th>
<th>Indicators of financial resources</th>
<th>Estimated Level of social/cultural resources</th>
<th>Participant and partner’s occupation* (education code*)</th>
<th>Indicators of cultural and social resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claire</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Home duties, prev nurse (3) Manager (4)</td>
<td>Pasta, Japanese or Vietnamese. Pizza/pasta out with children or occasional ‘fancy’ meal as a couple</td>
</tr>
<tr>
<td>Ruby</td>
<td>High</td>
<td>5th</td>
<td>High</td>
<td>Writer (4) Corporate financial officer (4)</td>
<td>Thai or Japanese Fish and chips on holidays</td>
</tr>
<tr>
<td>Bronwyn</td>
<td>High</td>
<td>5th</td>
<td>High</td>
<td>Allied health (4) IT programmer (4)</td>
<td>Wood-fired pizza, Chinese, Greek Italian or noodles. Subway or MacDonalds if travelling</td>
</tr>
<tr>
<td>Emma</td>
<td>High</td>
<td>5th</td>
<td>High</td>
<td>Home duties (4) Sales executive (4)</td>
<td>Thai, Japanese, Vietnamese, Wood-fired pizza. McDonalds if travelling. Occasional ‘fancy’ meal as a couple</td>
</tr>
<tr>
<td>Annabelle</td>
<td>High</td>
<td>4th</td>
<td>High</td>
<td>Home duties, prev teacher (4) IT manager (4)</td>
<td>Fish and chips, Thai, Indian or Chinese. Pizzas out with children</td>
</tr>
<tr>
<td>Robyn</td>
<td>Mod</td>
<td>3rd</td>
<td>Break even</td>
<td>Home duties, prev corporate worker (3) Sales (2)</td>
<td>Thai or Chinese. Eat out more than take-away as above or a pub. Very occasionally MacDonalds for daughter.</td>
</tr>
<tr>
<td>Penny</td>
<td>Mod/high</td>
<td>4th</td>
<td>Break even</td>
<td>Teacher (4) Telecommunications manager (2)</td>
<td>Kids have McDonalds once a fortnight. Otherwise pizza, Thai or Chinese. Eat out at Italian or a pub</td>
</tr>
</tbody>
</table>

*Descriptions of occupations have been modified to be more general for some participants to maintain anonymity
*Education code- 1=No further education 2=Apprenticeship/Certificate 3=Diploma 4= Bachelor degree or higher
<table>
<thead>
<tr>
<th>Estimated Level of Financial Resources</th>
<th>Indicators of Financial Resources</th>
<th>Estimated Level of Social/Cultural Resources</th>
<th>Participant and Partner's Occupation* (Education Code*)</th>
<th>Take Away/ Eating Out</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mod/high</td>
<td>5th</td>
<td>Break even</td>
<td>Nurse (2), Finance/manager (4)</td>
<td>Fish and chips (weekly) or hamburgers or pizza for everyone, Indian or Chinese just the adults. Occasionally McDonalds with kids, more often by herself at work as she enjoyed eating it. Eat out at pub/pizza/pasta</td>
<td>Visits friends each week in nearby suburbs. Go to other people's houses for a meal/BBQ and will take dessert (so that her children with allergies can eat it).</td>
</tr>
<tr>
<td>Mod/high</td>
<td>5th</td>
<td>Break even</td>
<td>Childcare (4), Engineer (4)</td>
<td>McDonalds, BBQ'd chicken and chips or pizza. Sometimes Thai. Eat out at Italian.</td>
<td>They go out bushwalking etc for “family adventures” on the weekend. Children often go to friends houses or have friends over and my involve eating. Occasional meals out tend to be “a social thing with another family”</td>
</tr>
<tr>
<td>Mod/high</td>
<td>4th</td>
<td>Break even</td>
<td>Teacher/project work (4), University lecturer (4)</td>
<td>Fish and chips, pizza or Indian occasionally. Too expensive to eat out with the whole family.</td>
<td>Talked about entertaining friends, which requires buying nicer/more expensive food than usual (blue cheese, dip etc). Decided to stop lately as too much trouble/too busy</td>
</tr>
<tr>
<td>Low</td>
<td>1st</td>
<td>Save</td>
<td>Home duties (4), Factory worker (4) [prev. an engineer but qualifications not recognised in Australia]</td>
<td>Domino's pizza. Eating out occasional pizza and pasta or McDonalds so that children can play in the playground</td>
<td>Share meals for special occasions with extended family- very expensive to host these events. Buys her meat from a butcher who is a friend of her husband.</td>
</tr>
<tr>
<td>Low/mod</td>
<td>2nd</td>
<td>Break even</td>
<td>Midwife (4), Technician (2)</td>
<td>Used to regularly eat McDonalds, KFC, Chinese- but not anymore. Occasional meal out at a pub</td>
<td>Occasionally eat with Sonia's mother. Spoke of discussing her 'new' shopping habits with friends who seemed to think it was a bit 'crazy' or too much work.</td>
</tr>
<tr>
<td>High</td>
<td>5th</td>
<td>Save</td>
<td>Racing industry (1), Skilled transport worker (2)</td>
<td>BBQ'd chicken, chips and coleslaw every week, eats out at work at race tracks</td>
<td>Occasionally have friends over for a meal, for coffee or to stay. Mentioned a girlfriend who was a bargain hunter and bought 'dinted cans' and 'yesterday's bread'.</td>
</tr>
<tr>
<td>Low</td>
<td>1st</td>
<td>Save</td>
<td>Administration (2), Own small business (2)</td>
<td>Too expensive to get take-away often. Home-made pizza instead. Only eat out very occasionally.</td>
<td>Very occasionally eat out as a couple, need to save up and may share a meal with husband. They do this with friends who can afford to eat out far more often. Every socialise with friends at a BBQ but doesn't often host. Volunteers through church on some food projects.</td>
</tr>
<tr>
<td>Mod/high</td>
<td>4th</td>
<td>Save</td>
<td>Administration (3), Factory worker (1)</td>
<td>Pizza. Eat out at the local RSL club (pasta, roast or fish etc), or occasionally to an Asian restaurant.</td>
<td>Partner plays bowls, family socialises at the RSL/ bowls club. Made birthday cake to take to friends place recently. Katrina feels like they don't know which restaurants to go to as they are new to the area try new places with friends occasionally.</td>
</tr>
</tbody>
</table>

*Descriptions of occupations have been modified to be more general for some participants to maintain anonymity.
*Education code 1 = No further education 2 = Apprenticeship/Certificate 3 = Diploma 4 = Bachelor degree or higher
<table>
<thead>
<tr>
<th>Name</th>
<th>Estimated Level of financial resources</th>
<th>Indicators of financial resources</th>
<th>Estimated Level of social/cultural resources</th>
<th>Participant and partner's occupation* (education code*)</th>
<th>Indicators of cultural and social resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerry</td>
<td>Low</td>
<td>1st</td>
<td>Break even</td>
<td>Book keeper (2) Courier driver (2)</td>
<td>McDonalds; but less often recently given change in daughters diet. BBQ'd chicken, KFC, noodles or pizza. Eat out pub or smorgasbord. Spoke of discussing the health status of some foods with someone at church.</td>
</tr>
<tr>
<td>Janine</td>
<td>Low/mod</td>
<td>2nd</td>
<td>Save</td>
<td>Home duties (1) Mining technician (2)</td>
<td>Pizza, BBQ'd chicken, fish and chips (all Halal versions). Would like to have takeaway food more often but restricted financially. Will only buy alcohol if having friends over (who are not Muslim) that is only once every couple of months - will also buy chips/dip.</td>
</tr>
<tr>
<td>Natasha</td>
<td>Low</td>
<td>2nd</td>
<td>Spend</td>
<td>Administration (3) Construction/driver (2)</td>
<td>Woodfired pizza or BBQ'd chicken, very occasional McDonalds or Hungry Jacks. Eat out pizza/pasta or McCafe for coffee and cake. Children will visit friends houses, but they only have family (aunt/mum) over to eat, not friends.</td>
</tr>
<tr>
<td>Louise</td>
<td>Low/mod</td>
<td>2nd</td>
<td>Save</td>
<td>Community development (3) Storeman (3)</td>
<td>Domino's Pizza, fish and chips or BBQ'd chicken and chips. Occasionally have friends over for a meal, would cook a dessert (eg apple crumble). Mentioned discussion how where to get bargains (food and other items) with other school mums, church members and other students at TAFE college (she was doing a training certificate). She was also a member of a public speaking clubly-roup. Best friends husband is an osteopath.</td>
</tr>
<tr>
<td>Jacqui</td>
<td>Low</td>
<td>2nd</td>
<td>Own no mortgage</td>
<td>Home duties/carer (1) Bistro chef (2)</td>
<td>Fish and chips (with dim sims etc). Hungry Jacks or McDonalds. Did not discuss social networks. Don't eat out at restaurants, but save up instead for family holiday once a year so they can eat out then without worrying.</td>
</tr>
<tr>
<td>Tamara</td>
<td>Mod</td>
<td>3rd</td>
<td>Save</td>
<td>Hospitality/retail (2) Truck driver (1)</td>
<td>McDonalds, Pizza, KFC, Subway or BBQ at children's sport. Visits girlfriend's houses with kids, mentioned several snack ideas/they'd picked up from these friends. Night before interview had a beautiful roast meal at a friends place.</td>
</tr>
<tr>
<td>Linda</td>
<td>Low</td>
<td>1st</td>
<td>Spend</td>
<td>Customer service (1) Storeman (1)</td>
<td>Hungry Jacks, Pizza, BBQ'd or fried chicken (several times per week). Eat out at all you can eat restaurant. Makes a cake that her girlfriend loves to eat and often requests that she makes it. Mentioned that it was nice to come to the interview to spend time with another adult and no children (had very young baby).</td>
</tr>
</tbody>
</table>

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