UNIVERSITY OF SOUTHAMPTON

Faculty of Medicine, Health and Life Sciences
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Food Choices of Young Women with Lower Educational Attainment

by
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ABSTRACT

FACULTY OF MEDICINE, HEALTH AND LIFE SCIENCES
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Doctor of Philosophy

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Poorly nourished women are more likely to give birth to smaller babies, as nutrients supplied to the fetus determine growth and development of key organs and systems. Children born to poor and disadvantaged women are particularly at risk, as these women are themselves born less able to nourish their babies in utero and are more likely to be eating unbalanced diets. The literature supports the hypothesis that the inadequate supply of nutrients to the fetus and in early infancy will increase the risk of ill health in later life.

The Southampton Women's Survey (SWS) found that education was the strongest predictor of consuming a diet in line with current government recommendations. Women of lower educational attainment ate the poorest quality diets. The current study aimed to understand why women of lower educational attainment have less balanced diets than women of higher educational attainment, and how we can use this knowledge to develop an intervention to improve their diets.

Three phases of data collection were undertaken. First, a focus group study showed that a range of psychological and social factors influenced young women's food choices, with differences emerging between women of lower and higher educational attainment. Social cognitive theory structured the interpretation of the findings. Women of lower educational attainment had lower perceived control over food choices; fewer appropriate mastery and vicarious experiences to provide them with food management, preparation and cooking skills; more negative affect; more impediments to eating healthily; less social support for eating healthily; and ambivalent views about the diet-disease relationship. Some women of lower educational attainment managed the food choices for themselves and their families better than others. In phase two a survey quantified the relationship between diet and these psychological and social factors in Southampton women. Questionnaire development was guided by findings from the focus group study and social cognitive theory. Eating a poor diet was associated with four factors: lower perceived control over life, fewer positive outcome expectancies, less social support for healthy eating and lower food involvement. Bandura's construct of self-efficacy was less important than perceived control in predicting quality of diet. In phase three an expert panel focus group gauged the views of practitioners working with our target population on how to improve the diets of disadvantaged women. Three themes emerged from the discussion: trust, meeting needs, and barriers to change. The practitioners gave us insight into the challenges they face, the barriers to changing women's dietary behaviour and what their role might be in bringing about change.

This research has increased our understanding of what influences women's food choices and what we need to do in order to improve the diets of young women with lower educational attainment. Increasing a woman's sense of control over her life may be the key to empowering her to improve her own and her family's diets. The next step is to work with key personnel in the City to develop an intervention for Sure Start Children's Centre staff, who already engage with the most vulnerable populations, and are thus best placed to support women to improve their diets.

For my Mum. I miss her.

She was always proud of me, but I think she would have been especially proud of this work.

The great aim of education is not knowledge but action.
Herbert Spencer
English philosopher (1820 - 1903)

The doctor of the future will give no medicine, but will interest her or his patients in the care of the human frame, in a proper diet, and in the cause and prevention of disease.
Thomas A. Edison
US inventor (1847 - 1931)

Nothing will benefit human health and increase the chances for survival of life on Earth as much as the evolution to a vegetarian diet.[1]
Albert Einstein
US (German-born) physicist (1879 - 1955)

[1] I admit – the last quote is something of a personal indulgence, in that it shows Albert & I are on the same wavelength, which came as something of a surprise to me!

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Declaration of Authorship

I, Wendy Turvill Lawrence, declare that the thesis entitled

"Food Choices of Young Women with Lower Educational Attainment"

and the work presented in the thesis are both my own, and have been generated by me as the result of my own original research. I confirm that:

- this work was done wholly or mainly while in candidature for a research degree at this University;
- where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
- where I have consulted the published work of others, this is always clearly attributed;
- where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
- I have acknowledged all main sources of help;
- where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself (p11-12);
- parts of this work have been published (Appendix A)

Signed: ……

Date: ……

Declaration - detailed

I have undertaken the following tasks for this research project:

Literature review

Entered all references on Reference Manager

Written this thesis

Written or contributed to papers arising from this research

For the Focus Groups:

- Developed discussion guide
- Prepared all associated paperwork, eg consent forms, information sheets etc
- Recruited participants
- Moderated all focus groups (including validation groups)
- Transcribed most of the discussions
- Thematically analysed the data (in collaboration with MEB)
- Developed the coding frame (in collaboration with MEB)

For the Nutrition and Well-being study:

- Designed the questionnaire (in collaboration with MEB)
- Liaised with Sure Start Children's Centre staff to arrange data collection
- Administered the questionnaire to the majority of the participants
- Checked and cleaned most of the questionnaires
- Liaised with computing staff re data entry
- Statistically analysed the data in SPSS (in collaboration with MEB/SRC)

For the Expert Panel Focus Group:

- Developed the discussion guide
- Recruited the participants (in collaboration with JK)
- Moderated the focus group
- Thematically analysed the data

Tasks undertaken by others (in collaboration with me):

- Development of focus group tools/paperwork – Mary Barker
- Transcribing of focus group discussions: Karen Drake, Sue Curtis, Viv Cresdee
- Development of Nutrition & Well-being questionnaire & paperwork – Mary Barker
- Data collection for Nutrition & Well-being study - Mary Barker, Tracey Tudball, Agnieszka Brenk, Danielle Lawrence, Julia Hammond and Kath Barnard
- Data entry – Vanessa Cox & team
- Statistical support – Sarah Crozier
- Theoretical discussions – Mary Barker, Cheryl Haslam, Chas Skinner, Susan Michie, David Barker
- Recruiting & convening Expert Panel Focus Group – Jeanette Keyte

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Assistance with the field work for the survey was provided with skill and enthusiasm by Mary Barker, Tracey Tudball, Agnieszka Brenk, Danielle Lawrence, Julia Hammond and Kath Barnard, who all did brilliantly to interview the women in the midst of chaos! Thanks also to Jeanette Keyte for her support in organising the expert panel focus group.

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Overview of this project

The aim of this project was to explore and ultimately understand more about what influences the food choices of young women with lower educational attainment, and to use this information to inform an intervention to improve their own and their families' diets. A substantial body of literature describes the importance of good nutrition for women and their children, and also highlights the persistent health inequalities that exist today. Those living in most deprivation suffer the most ill-health and are most likely to be eating poor diets. Education is one marker of general disadvantage, and level of education attained has also been shown to be strongly related to quality of diet, with more women of lower educational attainment eating the poorest diets. It is important to understand this relationship, if we are to develop an effective intervention to support women to improve their own and their families' diets.

Chapter 1 is a review of the literature on the significance of maternal and child nutrition, the possible role of education in food choices and related health inequalities. This chapter also puts this research into a policy context, by highlighting some of the recent objectives set by governments for improving the health of the nation and thus giving an imperative for this work.

Chapter 2 reviews the substantial literature on influences on women's food choices. It considers the usefulness of certain food choice and behaviour change theories, and key studies from a range of disciplines describing the range of factors known to be important: *environmental*, including affordability and accessibility of healthy foods; *social*, such as how significant others affect food choices made; *historical*, including the impact of childhood experiences of food and eating, as well as research on food choice trajectories and life transitions; and finally *psychological*, covering constructs such as control, self-efficacy, values and beliefs about healthy eating, mood and well-being.

Chapter 3 presents the first phase of data collection: a focus group study to explore possible influences on food choices of young women, drawing on the literature. The research question was *"Why do women of lower educational attainment eat poorer diets?"*. Eleven focus groups were held – eight with women of lower educational attainment, three with women of higher educational attainment. The data are presented and interpreted using Bandura's social cognitive theory and illustrated with quotations from the women. Differences between the groups were identified, but also differences within the groups. We observed that some women of lower educational

attainment appeared to be able to make better food choices for themselves and their families than other women of lower educational attainment. Guided by social cognitive theory, the factors that emerged most strongly in the thematic analysis were used to inform the development of the questionnaire for phase two of this project.

Chapter 4 presents this second phase of work: based on findings from the focus groups and aspects of social cognitive theory, the research question was *"How do key social and psychological influences impact the diets of women of lower and higher educational attainment?"*. Validated scales were used to measure the prominent factors identified in the focus group analysis, which were examined to see which were most strongly related to diet, as measured by a food frequency questionnaire. This made it possible to quantify the relationship between certain psychological and social factors, and quality of diet. The primary focus for this stage of the project was again women with lower educational attainment, as this population are most in need of improvement in their diet. A structured questionnaire was administered to 378 women attending Sure Start Children's Centres within the city's most disadvantaged areas.

Once the results from both these data collection phases had been explored in some depth, it was possible to begin to consider the design of an intervention to support this vulnerable population in making improvements to their diets. Before this could progress, it was important to consult with those who work with these women on a regular basis, and who are likely to be aware of the issues that arise from new initiatives. Chapter 5 describes an expert panel focus group held with 13 participants, most of whom were employed by various local agencies to support women within the recognised Sure Start areas in the city. These included Sure Start Children's Centre managers and co-ordinators, health trainers, health visitors and family support workers. The purpose was to understand the perspective of the practitioners who are likely to be charged with supporting the delivery of any intervention. Their views were therefore crucial at the early design stage. The research question was *"How can we translate our findings about the influences on food choice into an intervention to improve disadvantaged women's diets?".*

Chapter 6 reflects on all the work undertaken, summarising the key points arising from each phase of this research. It identifies how this new knowledge contributes to this field of study, filling some of the gaps identified in Chapter 2. Given what has been learned, it suggests what the next step should be in order to improve the diets of

disadvantaged women. Issues involved in bringing about behaviour change are considered.

Whilst this then brings this thesis to a close, my colleagues and I continue to move forward with this important work with energy and enthusiasm. The challenge remains to engage, motivate and inspire women eating the poorest diets to make changes to improve their diets and ultimately improve health outcomes for themselves and the next generation.

[2]

[2] Photographs throughout this thesis are of Sure Start Children's Centre staff, parents and their babies attending the Centres. It is not implied that any of those depicted are disadvantaged – they are included to broadly represent and acknowledge those with whom we have been working and who have made this research possible.

Chapter 1

Maternal nutrition and inequalities in health

This chapter aims to describe briefly: why poor quality diets are so damaging for women and their children; how income and education play a significant role in both diet and health; the current public health policy with respect to eating healthily; and the challenge we face in attempting to improve nutrition for disadvantaged populations. Key studies of the effects of maternal nutrition, health inequalities and public health policy are presented, and critical issues for this topic of investigation are defined.

1.1 Impact of poor nutrition on women and children

Firstly, why is there a concern about women's diet and how does poor nutrition of women relate to the burden of disease today? Coronary heart disease, stroke, type II diabetes and osteoporosis are the commonest causes of chronic illness and premature death in Britain. Differences in adult lifestyle go only a small way to explaining why one person develops the disease while another does not. Recent studies across Europe and in the USA provide consistent evidence that these disorders originate through faltering growth of babies in the womb and after birth (1;2). This permanently and adversely changes the structure and function of key organs including the heart, kidneys, liver and bones, and makes an individual vulnerable to developing chronic disease in later life, especially if they experience poor living conditions (3).

Whilst there is extensive evidence that a woman's dietary intake and nutritional status can have serious effects on her own health and well-being, a growing body of evidence now exists to demonstrate the importance of her nutritional status for her offspring (4;5). It is known that successful fetal growth is dependent on an adequate supply of nutrients from the mother, but the relationship between maternal nutrition and fetal growth is complex and still poorly understood (5). Nonetheless, research shows that poor fetal growth predicts both short and long-term outcomes: lower birthweight, thinness/shortness at birth, slower growth in childhood, as well as greater mortality and morbidity in the first year of life and throughout childhood (4). It is also linked to higher rates of cardiovascular disease, type II diabetes and other chronic disorders in later life. These latter associations are not just significant for very small or very large babies, but are seen across the normal range of birthweight and cannot be explained by confounding factors in adult life (2).

A woman's ability to nourish a baby and thereby protect its growth depends partly on her own experiences in the womb and in early childhood, but also on the nutrients held in her body stores built up over her lifetime. These resources are then used to nourish the fetus. The nutrition a woman received while she was in the womb and during her infancy establishes her capacity to manufacture and recycle the nutrients she needs from those she receives. People have to process the nutrients they receive to be able to meet their body's needs. This ability is what enables humans to live off a varied diet (6) and women enter pregnancy with a greater or lesser capacity to do this effectively. Taller, larger women who were large at birth and in infancy and tend to be from higher socio-economic groups, are better able to do this than shorter, thinner women who were poorly nourished in early life (7). These women from lower socio-economic groups tend to have a more limited repertoire of nutritional capabilities and a diminished response to the needs of pregnancy. Since they are less able to manufacture what the baby needs, these women require a diet that is closer to what is required. This would be a diet that is varied and balanced in its carbohydrate/protein composition.

Poorer quality diets are more common in women from lower socioeconomic groups, therefore women who have these limited capabilities are also those likely to have diets that poorly meet their own needs, thus reducing further their ability to meet the needs of a growing fetus. Many women in Britain have seriously unbalanced and unvaried diets that are known to slow the growth and alter the development of babies in utero (8). Children born to these women will themselves have a reduced capability to manufacture and recycle nutrients. Thin women with low body mass index have children who are more at risk of developing diabetes and raised blood pressure in later life (8). Thus a baby's long-term health is related to the nutritional status and physique of its mother, its birthweight being associated with its mother's height and weight, which reflects her own growth in childhood (4).

To break this downward spiral and prevent chronic disease in future generations, it is a priority to identify and address the barriers that may prevent women from eating a healthy, balanced diet. The public health message is clear: if diet is of poor quality, population ill-health will follow (9). Whilst nutritional improvements in adulthood have been found to improve long-term health outcomes, such as heart disease, diabetes and mortality (10), effect sizes are typically small. Animal models suggest that encouraging women who consume unbalanced and unvaried diets, to eat more healthily will improve their long term health and that of their children (11;12). Improving young women's diets before conception and during pregnancy may therefore hold the key to breaking

this cycle of disadvantage and ill health (12-14), as the potential for larger effects is greater – not only will women experience better health outcomes, but their children will be born at a lower risk of suffering certain chronic conditions. Reduced fetal growth is more common in deprived areas, and childhood generally is a critical and vulnerable stage where poor socio-economic circumstances have lasting effects (15). Income and maternal education are two indicators of socioeconomic circumstances that are well-known to affect quality of diet.

1.2 Income and education

Research consistently shows that there is a population of young women who are eating inadequate diets (16). Such diets are more common among poorer women (17;18). The UK National Diet and Nutrition Survey (19) compared the nutrient intakes of women living in households in receipt of benefits to those not in receipt of benefits, and found them to be lower in energy, protein, fat and fibre, as well as a range of micronutrients such as vitamins A and C. Those receiving benefits reported consuming more sugar, whole milk, burgers, kebabs, meat pies and pastries, and ate less wholegrain/high fibre breakfast cereals, oil-rich fish, fruit juice, fruits and vegetables, than their more affluent counterparts.

In most societies, women are responsible for the majority of the childcare and cooking. Evidence shows that when household food supplies start to dwindle and resources are not available to get more, mothers "buffer" children from the worst of the food deprivation (20;21). This can mean the women eat less food, have unbalanced diets or skip meals completely. This is in direct opposition to the original philosophy of the British Welfare Food Scheme set up in the 1940s, to protect pregnant women and children, because they represented important human capital: pregnant women needed to produce strong, healthy children who were seen as the workers of the future (22) UNICEF refer to the "paradox of plenty": there is more than enough food to go round, but even in rich countries throughout the world, the poorer people are, the worse the diet they eat, whilst spending proportionately more of their household income on food and having the harder time shopping for it (9;23). There are significant differences in the spending of households in the bottom tenth of the income distribution compared to those in the top tenth (24). Those in the bottom tenth spend a higher percentage of their disposable income on food and acquire more grams of food per pound spent. This generally means buying more foods higher in fat and sugar, which are cheaper per unit of energy than foods rich in protective nutrients, such as fruit and vegetables. It is suggested that the food budget gets squeezed to meet other less flexible financial

demands (17). The diets of these families may lack variety and choice, as this can incur additional cost and waste (25). Furthermore, lower income families consume more processed foods high in sodium, such as white bread, pies and processed vegetables (26).

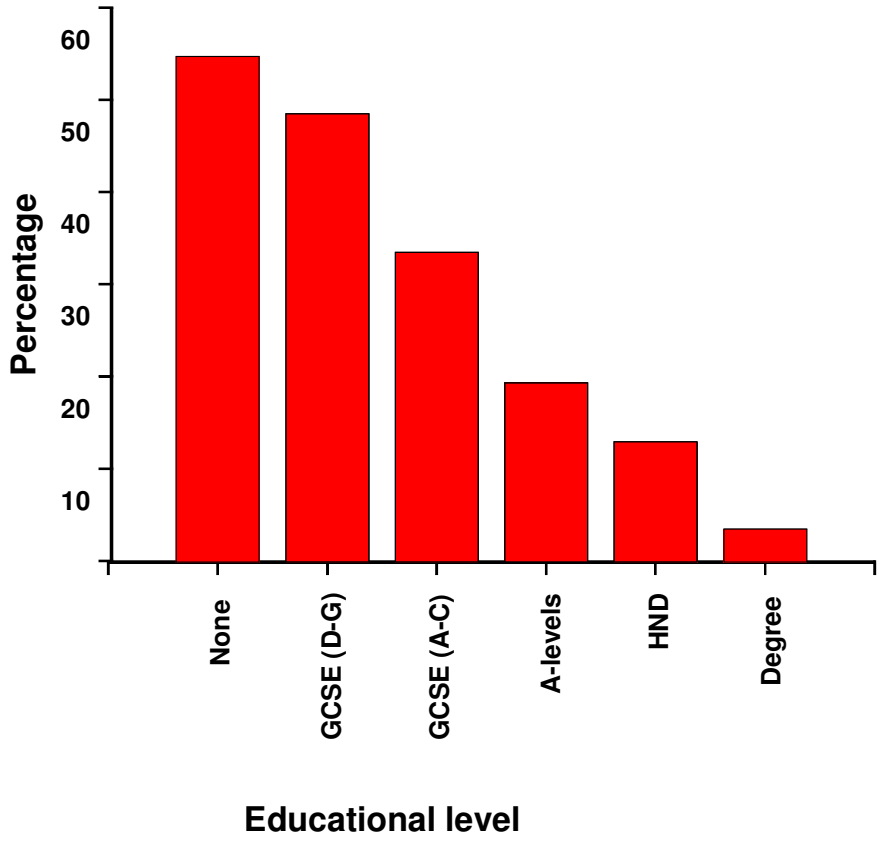
Whilst poverty clearly has an impact on diet and health, the recent Food Standards Agency low income diet survey has found evidence that, whilst there are some dietary inequalities related to income, the general population as a whole is not eating as healthily as it should (27). This indicates that income per se might not be the most critical influencing factor on dietary choice, and suggests that other socio-economic or psychological variables may also play an important role. As individuals, everyone likes to believe that they have choices, even if they do not exercise them. However, full choice for consumers would require a wide range of options, unlimited information and money. This precludes full choice for disadvantaged populations. The consumer society bombards consumers with information to aid choice, which simultaneously emphasises how uninformed they are and creates information overload, which cannot possibly enhance their decision-making. Choice without the appropriate information about alternatives, pros and cons, side-effects and consequences can be inadequate or disastrous. Information however can create false or guided choices, concealing the full range of actual choices; so it is argued that consumer choice is moulded, limited and manipulated, particularly by advertisers (28). It is suggested that the role played by preferences in determining buying behaviour is overestimated, and that economic factors are more important, such as budgets and financial uncertainty. It is likely therefore that the most disadvantaged populations – those with low income and lower educational attainment – are particularly vulnerable to making poorer choices. For genuine free choice it is argued that people must have adequate and appropriate information, be able to easily reach what they want in terms of time and effort to go shopping, and be able to afford what they want (29).

A recent survey found educational level to have the strongest influence on perceptions of a healthy diet (30), with those of higher educational attainment better able to recognise components of a healthy diet. The results suggest that many people defined healthy eating in a way which would suggest that the healthy dietary guidelines are having some impact, but there may be specific vulnerable groups who are missed by current national campaigns. Research shows that as one marker of socioeconomic status, educational attainment has a significant impact on health inequalities of many types. Low educational attainment is, for example, strongly associated with an

increased risk of chronic diseases, such as coronary heart disease, with low income having no effect once this was taken into account (31).

It is well-established that those with lower educational attainment eat poorer quality diets. A recent survey of over 6,000 women from across the social classes, with a wide range of educational attainment and living conditions, showed that women with few or no formal qualifications ate a less balanced diet than those with more qualifications (32). This relationship remained after taking account of other influencing factors such as social class, receipt of benefits, neighbourhood deprivation, smoking, age, number of children, level of exercise and dieting to lose weight. Diet was assessed by a food frequency questionnaire (FFQ), which had been extensively validated against other methods of measuring diet (33;34). Principal components analysis of the reported consumption of 49 food groups produced a diet score for each woman in the survey. The first principal component resulting from these scores described a pattern of diet that reflected how well or badly a woman's diet met current healthy eating guidelines from agencies such as the Department of Health (35;36). Strikingly, quality of women's diets in this study improved with each increase in educational attainment, with over 50% of those with no qualifications eating the poorest diet, compared to only 3% of those with a university degree (Figure 1). The women with high diet scores, who tended to have a higher level of educational attainment, were eating more fruit and vegetables, wholemeal bread, rice and pasta, yoghurt and breakfast cereals. Women with low scores, who tended to have a lower level of educational attainment, had higher intakes of chips and roast potatoes, sugar, white bread, red and processed meat, full-fat dairy products, crisps and sweets, cakes and biscuits, and soft drinks.

Figure 1 Percentages in the lowest quarter of the prudent diet score by educational level



It is not clear from research to date why education is so strongly linked to quality of diet. However, researchers suggest a variety of possible reasons. In a study of couples from New York state, differences were found between those who had secondary school education only and those who had higher education (37). Moving away from home to attend college or university was the most common food-broadening experience mentioned by these participants. The authors suggest this exposes individuals to alternative approaches to food and eating, and therefore leads them to broaden their definition of a meal and hence increases the variety in their food choices (38). However, this sample of Americans had an age-range of 20 to 75 years, and a variety of family scenarios: some had small children, some had grown-up children living outside the home and some did not have any. With such a range of living situations and ages, it is difficult to know the precise factors that vary in the experiences of these people that lead those with lower educational attainment to eat poorer quality diets. These factors need further exploration if disadvantaged women are to be supported in

improving their diets, though the paper does provide some interesting insights on how couples converge or diverge in their food choices once they commence cohabiting.

Another view is that highly educated people generally acquire and then put into practice new knowledge sooner than less educated people, who tend to cling to more traditional ways (39). When investigating these issues, it is therefore important to explore individuals' past food-related experiences, to assess whether there is a propensity for those with lower educational attainment to have maintained stable eating habits throughout their lives. This may reflect the tendency to stick with tradition and follow patterns adopted by their parents, rather than making changes based on emerging nutritional discoveries and advice. Those who take the journey through higher education, might be more open to making changes and exploring new ideas generally.

Leganger & Kraft (40) found an association between education and adhering to healthy eating advice, in that women with higher educational attainment had stronger intentions to follow recommended guidelines regarding fruit and vegetables, and did eat them more frequently. Other research explored the role of knowledge, specifically nutrition knowledge, to consider how it can be measured, how nutritionists and the public differ in what they think nutrition knowledge is, and what kind of knowledge might have the most impact on behaviour (41). The author suggests that education encourages individuals to hold a different set of beliefs, values and interests, which affects their food-related behaviours. However, the conclusion is that much of the evidence in this area is anecdotal and further research is needed to understand how people learn and use food-related knowledge and which sets of knowledge are required for them to get the best out of the current food system. Other research found that the more mothers know about food and nutrition, the better the quality of their children's diets (42). Again, it is not made clear exactly what they "know" that makes the difference, and how this knowledge can be gained by others in the most effective way.

It is thus hypothesised that there are a number of ways in which education might influence food choice. One possibility is that people with higher educational attainment may prefer different foods to those with lower educational attainment. Research has found that individuals with a university education reported more regular consumption of "healthy" foods, such as wholegrain bread, liver, yoghurt, and certain fruit and vegetables, and a lower preference for foods such as pies, sausages and white bread (43). Amongst women the variety in their diets also increased with educational

attainment, similar to findings from the Southampton Women's Survey regarding eating a prudent diet (32). As some of the foods preferred by those with higher educational attainment are relatively inexpensive (such as liver, rice, broccoli), this research is consistent with the idea that income alone is not the key predictor of food choice. However, the authors suggest that education may open the way to differential access to food and health information; it might enable people to rise up the social classes and become more empowered over the outcomes in their lives, for example through higher income. Alternately, self-selection factors may operate, in that people who are likely to choose healthier diets are also more likely to choose to remain in education for longer. An assumption from this research is that education is merely a marker for a variety of other socio-economic and psychological factors that are key in conferring the ability to make optimum forward-thinking choices in a range of settings.

The relationship between educational attainment and health is still poorly understood, but it appears to be an important one (15), as individuals with low levels of education generally have poorer adult health (44). As suggested above, education may be the route through which variables, such as socio-economic status or lifestyle, act on health, providing differential opportunities for income and employment. Or it may have a direct influence on health-related behaviour. Rather than simply material resources, other factors related to educational attainment may explain the relationship between socio-economic status, behavioural risk factors and ill-health. In this author's previous research exploring young women's health behaviour in pregnancy, the level of educational attainment was related to whether women continued to smoke and took important supplements, such as folic acid and iron (45;46). These behaviours were related to how responsible women felt for the health of their unborn baby, and how ready they were to make positive changes to their smoking behaviour (45;46). This suggested that those with lower educational attainment are less likely to believe in their ability to influence health outcomes, and thus are less likely to adopt health-promoting behaviour. This lowered sense of personal responsibility for health in women of lower educational attainment may explain the association between lower educational attainment and diet. Variables that might also affect the adoption of healthy behaviour include self-efficacy, access to and understanding of appropriate information, as well as social influences. All of these may vary by level of educational attainment. Furthermore, educational experiences determine a person's peers at key life course periods when certain risk behaviours tend to be adopted (47). For instance, there is much evidence to demonstrate the role of peer influence in adolescence on health behaviour, such as smoking (48).

The Acheson Report (15) presents the findings from an independent inquiry into inequalities in health. It proposes four key reasons why education plays an important role in influencing inequalities in health. Firstly, as postulated previously, education is a determinant of an individual's socio-economic status, which in turn influences income, housing and other resources which are related to health. Secondly, it prepares children for life by providing them with the practical, social and emotional knowledge and skills they need to achieve a full and healthy life. This includes skills in developing relationships, dealing with conflict, as well as some practical skills such as cooking and budgeting. Thirdly, it primes individuals to participate fully in society, to utilise available services, to co-operate and work together, and understand other groups in society. Finally, educational establishments generally provide an environment which is safe, healthy and conducive to learning (15). The first three of these specifically can clearly influence food choices in a variety of ways, and are supported by the literature reviewed above. Income has a role in determining how much can be spent on food; learning appropriate skills for understanding nutrition, learning to cook and how to negotiate and manage social relationships, will provide an appropriate backdrop for making optimum food choices for a family; and gaining an understanding of how to utilise services and co-operate with others, will enhance the ability to seek help, share information and thus take advantage of services available to those most in need. It is clear that the effects of education on diet require further investigation and documentation, as it is likely that its influence is widespread.

Food choice is a complex behaviour, with evidence from the literature suggesting there is a range of socioeconomic variables which are likely to play a role in sustaining this behaviour, and thus perpetuating inequalities in health. The relationship between these variables and other individual factors needs to be explored in order to understand what most influences and constrains food choices in women of lower educational attainment, as it is clear that they are at most risk for diet-related ill health for themselves and their children. High numbers of them will have been born less able to provide adequate nutrition in utero, and subsequently eat and provide a poorer diet for their families. It is clear that this vulnerable group must be targeted in interventions to improve their health outcomes and those of their children. Young women of child-bearing age with lower educational attainment will thus be the focus of this research project. The imperative for work such as this has been recognised in recent Government papers (49-51), which highlight some overarching priorities for changing health behaviour, including improving diet and nutrition.

1.3 Public health policy

If there are to be population changes in diet, it is crucial to understand the current climate with regard to health promotion. Only then is it possible to begin to envisage how important messages can be framed, initiatives delivered and changes supported in today's society. In the middle of the 20th century, the Government generally took a top-down approach towards preventing ill health. "Public health" was seen as something that was done to the population, for their own good, by impersonal and distant forces, with varying degrees of success (52). In the past there has been fierce opposition to public health measures, for example when water and sewage systems were first brought under Government control, the policy makers were called "paternalistic" and "despotic". Today many industry groups argue that individuals should make their own choices about engaging in health behaviours, with accusations of "nanny stateism" levelled against regulations restricting unhealthy choices. Health researchers and policy organisations on the other hand are in favour of further regulation, suggesting that forces outside of people's control can be key influences on their choices (50). This is the philosophy behind efforts to curb tobacco use by increasing prices and imposing restrictions on its purchase and use.

The Westernised diet with its high meat and dairy content, plus high calorie foods such as burgers and soft drinks, exerts a powerful environmental influence on consumers. It is suggested that global food marketing puts before people an awesome array of endless food choice, available with very little effort from consumers (9). Many of the unhealthiest, energy dense foods are therefore readily available, relatively cheap, and culturally acceptable, so have become habitual choices. It is not clear what single steps could be taken to regulate people's food choices in these circumstances.

As the emphasis in public health has swung from tackling infectious diseases to managing chronic conditions, it is suggested that at the start of this 21st century, the UK needs a new approach to the health of the public, responding to the needs and wishes of its citizens as individuals, reflecting the realities of their lives today (49). A first important step from this growing interest in preventing illness and promoting good health is to ask the people what they want and how they can be helped realise their aims: what support do they need, when do they want to be left alone, and what do they want to change? It is argued that they look to the Government to provide them with clear, unambiguous information about healthy/unhealthy choices – not to make decisions for them (53).

The Wanless report (54) defined public health as

> *"the science and art of preventing disease, prolonging life and promoting health through the organised efforts and informed choices of society, organisations, public and private, communities and individuals" (p3).*

It suggested that, whilst individuals are responsible for their own and their children's health, they need to be actively supported to make better decisions about their own health and welfare because of system failures that influence their decisions. These include structural problems, such as limited access to good fresh food, as well as a lack of information in an appropriate, user-friendly format. The report recommended that any service to the public should obtain feedback from the target population and sub-groups about whether messages are being well-received and understood (54). There is also the problem of engrained socio-cultural attitudes and behaviours not conducive to individuals pursuing healthy lifestyles, such as television watching, driving, not exercising, and eating processed convenience foods.

Behaviour clearly contributes to the burden of illness today, with treatment of behaviour-related diseases being more expensive than the cost of behaviour change interventions (50). One obvious example of this is the rise and consequences of obesity. Being overweight is a measure of possible ill health, with obesity being a risk factor for many chronic diseases. Excess bodyweight is one of the most visible, but neglected risk factors contributing to the worldwide disease burden, leading to decreased life expectancy due to cardiovascular disease, type 2 diabetes and some types of cancer (55). The main causes are clearly overeating, especially foods rich in fats, extracted sugars and refined starches, coupled with reduced physical activity. To improve the situation, people must be motivated to eat less, to eat healthier foods and to exercise more. If the dietary behaviour of young women and their children were changed, the improvement in their health would inevitably reduce the rates of obesity and diabetes. Tackling poor nutrition has been given a new political imperative in recent years by this rising prevalence of obesity (50), particularly in children. A recent Government report states that about 10% of children are now obese, with a further 20-25% overweight. It suggests that nearly 60% of the UK population could be obese by 2050 (51). Furthermore, there is a marked social class gradient in obesity which is greater for women than among men. Senior policy makers are being drawn together to discuss their role in counteracting obesity, and to formulate recommendations that will give political guidance and provide a strategic framework for taking action. The recent

Foresight “Tackling Obesities: Future Choices” project assembled evidence and expertise from a range of disciplines to explore how to tackle obesity over the next 40 years (51). The report’s findings challenged the simple portrayal of obesity – eating too much and doing too little – identifying thematic clusters of linked variables that influence obesity. These include areas of social and individual psychology, as well as physical activity, physiology and food production and consumption. The report states that *“the causes of obesity are embedded in an extremely complex biological system, set within an equally complex societal framework.”* (51) *(p5)*. So whilst behaviour change is seen as an important component of any response to obesity, this is also understood to be a complex process. Any effort to address it has to go beyond education and the provision of information. Individually-focused interventions might be effective for small numbers of individuals, but to see a population shift, elements of the obesogenic environment will also need to be targeted. The authors thus question the usefulness of isolated initiatives, proposing instead a comprehensive, long-term strategy that brings together many stakeholders in developing sustainable interventions.

To date, no health system or society has developed an effective strategy to manage and prevent obesity (55). There is no real policy framework for dealing with food, health and low income – individuals are still seen to hold the responsibility for making the right food choices, with minimum state “interference” (22). Policy makers may need to acknowledge that in certain circumstances, people will sometimes have more important priorities than achieving good health, and that food choices are entwined with other aspects of people’s lives. Worsley (56) argues that consumers seek a wide variety of benefits from food, not always or solely health benefits. They demand convenience and value for money. Their behaviour is guided by a range of internal principles and social influences, and views about food habits are part of a social beliefs and values system acquired over time. This means that an individual’s perceptions of health and nutrition may be very different from those of health professionals. Therefore, health promoters need to provide clear explanations when required, be flexible in their approach to education and awareness-raising, base advice in sound scientific evidence, and encourage food companies and health agencies to work together to promote healthy eating patterns and meet consumer needs (56). Furthermore, social and public health initiatives should be designed and implemented in ways which facilitate good quality evaluations of their effectiveness, and monitoring of their impact on health inequalities (57). Are these goals achievable?

1.4 Challenges

As food is a major contributor to health and well-being, both of which are compromised in households living in poverty, the issue of poor nutrition needs addressing urgently. However, food and nutrition have often been relegated to the sidelines in regeneration strategies, with the realities of life for those with too little money living in deprived areas being largely ignored (22). There is no duty on local authorities to ensure that affordable food is available in local shops, or that people have sufficient income to obtain food (22).

The evidence is clear that a mother's nutritional status has profound affects on the health of her children throughout their lives (2), and that women of lower educational attainment are more likely than others to eat unvaried and unbalanced diets (32). The aim of the current study is to find out why this is so, in order to target most effectively an intervention to improve the diets of women of lower educational attainment. Health professionals consider this population of disadvantaged, poorly educated individuals to be hard to engage. This may reflect inappropriate strategies that have been used in the past to try and reach them. For instance using written communication to provide knowledge is a favoured health promotion approach that may not be appropriate for reaching socially deprived groups who tend to have lower literacy levels. Nutrition knowledge is considered a necessary but not sufficient factor for changing consumers' food behaviours (41). It is argued that there is also a need to take account of consumers' personal food-related goals and their acquisition of procedural knowledge – knowledge about how to do things - that will enable them to attain these goals. Conducting research to understand the needs of this population is hampered by the recruitment strategies favoured by research ethics committees, which again generally involve written communication methods such as letters, information sheets and measurement tools, which may be misunderstood by those with poor literacy and therefore receive poorer responses (50). If programmes are to be developed specifically for this population, it is essential that individuals from that population are included in the research. Therefore, researchers need to address issues of recruitment, retention and representation of this "hard-to-reach" population.

Social marketing can be used to target campaigns by identifying sections of the population that share characteristics in relation to the target behaviour. Programmes then need to take account of individual differences in ability to change behaviour (50). Behaviour change interventions often concentrate on one behaviour at a time, rather than addressing a cluster of behaviours that socially deprived groups are more likely to

exhibit (15). Research into changing clusters of behaviour is complex and expensive, and involves addressing the structural issues that reduce choices in more disadvantaged populations (50). Many dietary interventions have historically been aimed at pregnant women where there are specific opportunities within healthcare settings to provide such interventions. But there has been little work undertaken on developing and evaluating interventions aimed at improving access to healthy food, or targeted at practical issues such as food skills in vulnerable women (16).

Some population level interventions have been shown to produce behaviour change. The recent Food Standards Agency (FSA) labelling scheme which gives fats, saturates, sugars and salt a traffic light colour-coded label to indicate their levels in the product (red indicates high levels, and green low), appears to be affecting consumers' choices of certain prepared foods, such as sandwiches and ready meals (50). However, there is evidence that consumers with lower educational attainment are more likely to exhibit "nutrition backlash", which refers to a broad spectrum of negative feelings about dietary recommendations due to information overload and confusion over so many messages (58). They are also less likely to read or utilise all aspects of nutrition labels (55;59). This may mean that this population are less likely to be taking notice of these new colour-coded labels and are not buying these healthier prepared foods. Additionally, pre-prepared convenience foods are relatively expensive and may not be eaten by those with less money to spend on food. So this type of population level intervention is probably not targeting those most in need of improvements to their diet.

As education has been shown to have such a strong relationship with diet, it is essential to target women of lower educational attainment in any intervention. It is not clear why education is so strongly related to quality of diet, or what steps would be most effective in improving diet in those with lower educational attainment. Would enrolling them all onto an educational programme, regardless of content, result in improved diets? It seems unlikely. However it does seem obvious that to be effective, interventions must be based on evidence gathered from this population. Deeper insight is required into the factors influencing their food choices, and what might motivate these women to make dietary changes. The public health challenge is therefore to recruit and engage these women in research and interventions, motivating them to take steps to improve their own diets and thus their health and well-being, as well as that of the next generation. This project aims to take on the challenge of identifying how to support this target population to improve their diet, and ultimately to inform the development and evaluation of an appropriate, effective intervention. The

next step to be taken before collecting any data, is to review the literature on potential influences on food choice, covering as broad a range as possible, in the way described by the Foresight report (51). This should highlight what questions need to be asked of the target population, in order to understand how they can be supported to make dietary changes.

Chapter 2
Influences on women's food choices

2.1 Overview

The previous chapter presented the background to this research, highlighting the importance of maternal nutrition for good health in the next generation, and how poor quality diets are more common in disadvantaged women, such as those on low income or with lower educational attainment. This sustains inequalities in health which public health initiatives have to date failed to correct. Understanding why women choose to eat the food they do is the first important step towards improving diets. This chapter reviews the literature on factors that influence food choices, taken from a range of disciplines.

There are many global influences on food choices, as well as factors in the macro and micro-environments. Global influences are shaped by the productionist paradigm of food provision, which in today's developed world means extensive choice is available to individuals who have the necessary resources (60). These resources include money, access to shops, time and the knowledge required to choose and prepare the variety of food products on offer. The negative side to the extensive range of foods available is that many of the cheapest, easiest to prepare 'convenience' foods are high in saturated fats and sugars that are not conducive to eating a healthy diet. Thus the choices an individual makes are going to be determined partly by what society and the food industry dictates.

> *"Business spends huge sums of money trying to mould and respond to consumer aspirations: by contrast, Governments deliver huge amounts of rhetoric but very little money on urging consumers to change their diet." (9)p184*

Within this climate of competing influences, macro-environmental factors vary according to local community and social circumstances, shared by individuals living in similar situations. Micro-environmental influences within the household will also play a big role in determining the food brought into the home. Family dynamics will affect the choices made by the main food provider, usually the woman. Understanding the interaction of these macro and micro-environmental influences is likely to be important in any attempt to improve the food choices of disadvantaged populations and therefore

meet the health targets set by Governments and international health organisations (51). A review by the British Nutrition Foundation commissioned by the Food Standards Agency in 2004 raises the concern that there is a limited number of UK-based studies in most settings, including the workplace, schools, supermarkets (61). It points out that very few community-based food choice interventions have been carried out in the UK, particularly amongst disadvantaged groups. To inform future work, it argues that it is not sufficient just to popularise a message, such as eat less fat or eat more fibre. Even when people have the necessary knowledge, they need to be motivated to change their behaviour. Eating behaviour is evidently difficult to alter because so many factors influence food habits, and it is often challenging to disentangle the effects of individual factors. Hence the psychological and social factors that influence food choice and behaviour change need further investigation in specific populations.

The next section of this thesis reviews the existing literature, describing the range of influences on food choice, and identifying where the gaps are in current knowledge. It also reviews food choice and psychological theories that might inform attempts to improve the diets of disadvantaged women. Firstly, what insights do food choice theories provide?

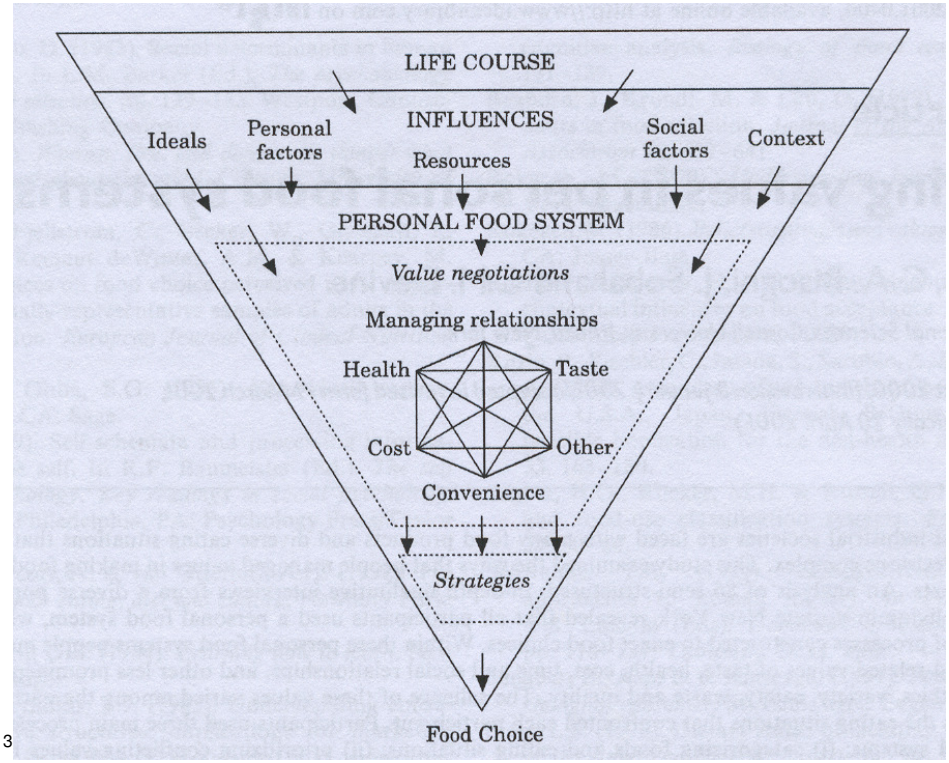
2.2 Food choice theories

When making food choices, individuals have to consider what, how, when, where and with whom they eat, as well as selecting and consuming foods. These choices express preferences, identities and cultural meanings, and determine which nutrients and other substances enter the body to subsequently influence health, morbidity and mortality (62). There are broadly two general types of food choice models. Firstly, models and theories that have been developed to explain other topics, such as health behaviour change, are applied to food choice. These will be explored later in this section when considering the psychological literature. Secondly, models of food choice have been developed from qualitative research, such as in-depth interviews and focus groups, about how people engage in food choices.

The Food Choice Process Model (62;63) is one such model that has been developed using the second approach. The most important components are portrayed in Figure 2. Whilst not explicitly listing all possible influencing factors, this model represents the crucial processes that people use in selecting foods, and the relationships between

these processes. This model recognises that food choice processes are complex, evolving, dynamic and often situational (62;63). It includes three major components that operate together: the ***life course***, ***influences*** and a ***personal food system***.

Figure 2 Food Choice Process Model (63)



[3]

People often attribute current eating patterns to past experiences; hence the influence of the ***life course***. This suggests that food choices are dynamic and evolve over time. Beyond developmental (eg ageing) and life stage (eg childhood, adulthood) approaches, the life course perspective allows for an individual's personal agency in determining their own food choice trajectory. Agency is defined as the accumulation of experiences in an individual's lifetime, their expectations for the future, and changes that happen at specific times in certain contexts (62).

Various factors, from past experiences and current situations, which shape people's eating behaviour are included as ***influences***. These are categorised into five types:

[3] Reprinted from Appetite, 36(3), Connors M, Bisogni CA, Sobal J, Devine CM, Managing values in personal food systems, 189-200 (2001) with permission from Elsevier.

ideals, personal factors, resources, social factors and *contexts*. Again these fluctuate over the life course, interacting with all other influences. *Ideals* are the socially and culturally-learnt standards that are used to make food choices; that is norms about how one should eat. This might include ideals about "proper" meals, manners and health. *Personal factors* include physiological, psychological or emotional factors, and again these develop and evolve over time, providing a unique individualised construction of food choices. *Resources* are the assets available to people for making food choices, such as money, transport, time, skills, knowledge, and social capital. *Social factors* are the relationships people experience; their roles, families, groups, organisations, communities all provide opportunities for constructing eating relationships and food choices. *Contexts* include the physical surroundings, social policies and climates that people operate within. Crucially, this also includes the food and nutrition system which determines what foods are available for consumers to select (62).

Finally, the ***personal food system*** consists of the cognitive processes individuals use which represent how options, trade-offs and boundaries are developed. They include the processes of constructing, negotiating and balancing values related to food selection and eating in different situations. These values are dynamic, formed of interpretations and meanings related to food; emotional affect can influence an individual's values at any given time. Important values include health, taste, cost and managing relationships (62). Understanding the priority given by disadvantaged women to these different values might provide some insight into how they can be supported in improving their diets.

The food choice literature suggests that possible influences on food choice can be portrayed as falling under four broad headings, as depicted by Figure 3. The environmental factors work at a global and community level; the social factors then relate to closer influence such as family and friends; historical factors are pertinent to individuals' own life-course experiences; and finally, psychological factors may mediate the effect of all the other three areas of influence, depending on each individual's own personality traits and psychological functioning. Some of these areas were identified as key influences on obesity in the Foresight report's system map (51), which is clearly relevant to work on food choices.

Figure 3 Schematic view of categories of food choice influences

The next section of this chapter explores the environmental, social, historical and psychological influences on women's food choices.

2.3 Environmental influences on women's food choices

Behaviour takes place within a context, with environmental factors having an impact on how an individual will act. No-one acts in isolation. Women's food choice behaviour will be affected by factors in their environment, which may be largely outside of their control. It is important to understand and address these environmental constraints on diet, whether real or perceived, if any initiative to improve women's quality of diet is to be effective. One major factor is likely to be the relative, or perceived, cost of eating healthily.

2.3.1 Food insecurity

Large socio-economic differences in patterns of diet suggest that a woman's environment has an important impact on her food-choice decisions. One of the most significant factors is undoubtedly income, alongside availability and affordability of good-quality healthy foods, and this can lead to disadvantaged families experiencing food insecurity. Food insecurity is when the availability of nutritionally adequate and safe foods is limited or uncertain (64). Having lower socioeconomic status and being poor are strongly related to consuming an inadequate diet (65), particularly where food insecurity exists, and women make trade-offs between their own health and their children's (20). Women will frequently ensure their families are fed before they feed themselves, even if it means they themselves go hungry (66). Poverty is associated with less variety in foods eaten, and with low fruit and vegetable consumption (17). A

study looking at children's diets found that eating less healthily and unhealthy snacking were associated with greater deprivation (derived from post code) and lower maternal education (67).

It is the experience of many disadvantaged families that it costs more money to eat a healthy diet, so food is bought on the basis that it can fill up the family as cheaply as possible (66). Hence there is a focus on quantity rather than quality, and on low quality, high carbohydrate food such as potato products. Whilst low income may not be viewed as a barrier to buying a family's normal amount of fruit and vegetables, research has shown that some believe they cannot afford to buy larger amounts (68). It was seen as an additional expense, rather than an exchange of certain food items for healthier options. The authors concluded that motivational, psychosocial and lifestyle factors presented a bigger problem than affordability and access in determining quality of diet, as not all their population were eating poor diets. The question is how to address such factors.

Recent research showed that in families where the only parent or both parents worked full-time, children were eating fewer portions of fruit and vegetables (69). Children of parents who worked part- or full-time, were watching more television, more likely to be driven to school and drink sweetened beverages between meals. It is hypothesised that when the only parent or both parents are working, it may limit their ability to provide their children with healthy foods and opportunities for physical activity. Stressors inside and outside the family are proposed to affect individual and family behaviour through real or perceived scarcity of time and energy (21), and these can be particularly problematic for disadvantaged populations. Spillover between work and family is defined as positive and negative feelings, attitudes and behaviours that are carried over from one role to another. Research exploring work-family spillover and role overload in low-wage parents, found many negative influences on their food choice coping strategies, which were ultimately not effective in reducing spillover (21). Dietary outcomes associated with negative spillover from work included fewer meals eaten and dissatisfaction with food choices. The daily demands faced by low-wage parents led them to feel they did not have the time or energy to be "good parents" and feed their families "right", to enjoy food or cooking, or to make healthy food choices. Their coping strategies included "quick" meals, which were less healthy than they would like, thus increasing the consumption of unhealthy foods. Parents also tended to reduce their expectations for family meals, considering them just another chore, and less of a priority. This study provided interesting insights into the lives of low-wage workers, but these only make up one section of this disadvantaged population, with many others

being unemployed or young stay-at-home mothers caring for small children. All may be affected by poverty, but different work status might influence the strategies used to cope with a lack of money. More research is needed in order to understand how these strategies might differ for disadvantaged women who choose to be full-time mothers rather than being in paid work.

2.3.2 Access

Intrinsic to food insecurity is the issue of access. Many campaigns to tackle poor diet have concentrated on deprived inner-city areas, where large networks of streets and estates are believed to make it difficult for tenants to access inexpensive, good-quality food. There is a substantial literature on "food deserts" – populated urban areas where residents do not have access to affordable, healthy foods (70) – where the development of edge-of-city superstores is linked to the closure of smaller inner-city and suburban food stores, disadvantaging consumers who do not have access to a car (71-73). Smaller, general stores have less fresh food and are more expensive, resulting in consumers without cars struggling to eat a healthy diet (71). This does not go unnoticed by those on low incomes forced to shop in local stores, who realise they have to limit their shopping to essential items because of inflated prices, or risk wasting money (66).

However, there is contradictory literature on food deserts and whether they are as significant a problem as they are portrayed (70;74). Access to a large supermarket is not necessarily a problem, even for those without a car (68). Big "multiple" stores are able to stock a wide variety of reasonably priced foods, and it appears that many of these are moving back into city centres and local sites. Many shops located in or near deprived areas, stock a range of basic food items either similar in price or cheaper than in more affluent areas (70;74). However, when new superstores do get built in areas of poor food retail provision, it has been shown to lead to a sudden and marked improvement in access to healthier food items, with a corresponding increase in the local population's fruit and vegetable consumption (75). In reviews of the evidence for the existence of food deserts, it is suggested that the limited data from small scale studies might have been over-interpreted, because the findings fit in with the way major Government groups and agencies currently view health problems (70). In other words, the prevailing view being that poor people would eat better if they had easy access to cheaper, healthier food. At the moment too little is understood about the shopping practices of disadvantaged populations to know whether this would be the case.

There has been an emerging interest in the role of "place" in shaping people's health behaviour. Place is defined as the specific lived experiences of individuals, which are shaped by their interactions with their immediate environment, taking into account many aspects of collective, shared and social functioning (76). It can be seen as a summary term encompassing social, psychological and material exposures that might influence health. The debate is over the relative importance of individual and place characteristics in determining health behaviour. Researchers have been accused of assuming that associations between places and health stem from population characteristics of residents in the area, such as age or social class composition. It is argued that there is a need to study the local social and physical environments which might promote or compromise health, in order to achieve improvements in public health (76). An exclusive focus on just the material features of a place, or on the psychosocial features of the residents is likely to be counterproductive. Thus, there would be no point investing in new sports facilities if the local population were unable to afford or access them; and equally, there would be no point in encouraging collective action among the local population if no facilities were being offered. It is important to understand the way these social and physical environmental interactions translate into individual food choices if interventions to improve diet are to be appropriately targeted and effective.

2.4 Social influences on women's food choices

As well as the effect of the macro-environment, women's micro-environments will have an important influence on their food choices. To understand a woman's food choices it is essential to be aware of her social world at all its levels including society, community and family, and to gauge her perception of this world. It has been said that:

> *"people never eat alone or uninfluenced by others, since they always eat in the context of internal society" (77)(p223)*

Thus food consumers can be seen to exist within the contexts formed by other individuals and groups, such as family and friends, food industries and Governments (56). Feeding a family is central to family life. Family feeding activities include the procurement of food, preparing food, making meals and cleaning up. There is also a range of less visible aspects, such as on-going planning and organisation, skills involved in monitoring food supplies and co-ordinating food preparation. Some of these activities can be hard to measure, as they are challenging for informants to

articulate, so qualitative research methods are required to explore these aspects of feeding a family. Food choice practices are relevant targets for public health nutrition efforts to change food selection patterns. Knowledge to inform nutrition interventions must take into consideration the perspectives and lived experiences of different population groups, as aspects of the social context are integral in shaping eating patterns (78). Such qualitative work is beginning to happen around the world, and can point to appropriate intervention approaches with specific populations, for example recent research in rural Oregon in the United States (79). The authors suggest that some intervention approaches could apply to their low-income women as well as similar UK populations. This could include demonstrating how to eat healthily on a budget, with ideas for simple and labour-saving cooking methods. Foods should be appealing in appearance and taste to all family members. Other intervention implications may be more specific to US women, such as the finding that meat is central to the meal. Free food samples and coupons are also more embedded in American culture. Characteristics of their sample of young, American women are also likely to differ from other samples in other locations, thus highlighting the need for further research with women in the UK.

Knowledge about the ways people interact with respect to food is accumulating, but much still needs to be understood, and researchers need to consider how individuals manage food choices in social relationships (80). Social support from family, friends and co-workers has been found to predict twelve month increases in fruit and vegetable intake, independently of demographic factors (81). Support can come in a variety of forms, including instrumental support such as helping with transportation to widen access to healthier foods (66), or as general help from family members with household food tasks (82). Working mothers were found to be more dissatisfied with the effect on their family's diet of balancing work and family demands, when they lacked family support and help with food tasks (82); they described their food provision responsibilities as an unwanted burden. Other research has found that friends' support was the most important factor in encouraging women to change their diets, whereas the most important factor for men was their own motivation to change (83). The authors speculate that friend, rather than family, support may be important for women as relationships with friends may be less difficult or complex than family relationships and thus have more beneficial effects for dietary change. For instance, family members have been described as the most, as well as the least, helpful members of the social network of women trying to lose weight. As women are traditionally the main gate keepers for food, other family members may not perceive that women need help in making dietary changes. The research also found that men and women were both

more likely to rely on women for their primary source of support, which brought with it a negative side for women, including the responsibility of building and maintaining a social network. This can be undermined when others show disapproval or disrespect, fail to fulfil expectations or place heavy demands (83). It is clear that social relationships, such as those with parents, spouses, children and friends, are important influences on personal food systems – particularly women's – and rarely remain stable over time. Age and number of children in the home is one aspect of family life that will change, and mothers have reported that having fewer and older children leads them to feel more satisfied with the way they manage food and eating (82).

It has been reported that when women move in with a partner, their food choices become restricted by the man's preferences (84), and thus eating has the potential to create conflict, and to influence the health of both partners. Negotiations ensue and are important to study because of the high proportion of food eaten with, or under the influence of, a partner (85). This highlights the role of power issues within the home and their effect on food choices. One study showed that having a partner who cooks at least some of the time, leads to greater maternal satisfaction with their food management skills (82). Mothers also reported that negotiating changes to household food roles, made it easier to balance their responsibilities and meant they felt more satisfied with their food choices. Satisfied mothers in this study typically held the primary household food role and liked to cook, but expected and received help with food tasks. Those with less family support described multiple trade-offs, such as skipping meals or providing less nutritious, convenience foods for themselves and their children (82). Families and households provide one of the most important sets of interpersonal relationships influencing food choice (86). The decision-making process within the family context is complex, affected by personal values and preferences, resources, family dynamics and social expectations. We need to learn more about how disadvantaged women make decisions, considering all these influences on the decision-making process.

It is not always the person doing the shopping and cooking who makes the food choices for the family. Whilst women tend to do the majority of food shopping and preparation, the preferences of men and children in the home are primary influences on the food choices made (87). In a recent study, women cited objections from male partners as the greatest barrier to healthier eating (88). The men were often described as "meat eaters", and even women who had modified their diets to make themselves feel better, gave up these changes under the influence of a new partner. Some women described partners who encouraged them towards healthier eating, but nonetheless,

expressed a willingness to accommodate the preferences of a male partner. The household diet was also influenced by the food preferences of children, who were often described as "picky eaters". Some women refused to accommodate children's preferences, but others only cooked meals they knew the family would eat (89), thus impacting on the quality of the whole family's diet.

Other research suggests that a woman's perception of her role within the household influences her food choices for the family (90). Study participants saw healthier eating as being more common for married people, and one talked of it being part of her spousal role to encourage her husband to eat more fruit and vegetables. A woman's need to manage social relationships or minimise cost can come into conflict with her desire to provide healthy food choices (91). Introducing healthier foods is often met with resistance from family members who refuse to eat them, leaving women with a dilemma (63). Unless faced with a significant health crisis, women tend to place a higher priority on maintaining social relationships through meeting others' food desires, rather than persisting in efforts to provide healthy food choices (92). It is important for women to be seen as good mothers, not only by society and their peers, but also by their children (82). This can mean that a desire to please their children on a daily basis by meeting their preferences may become the most important measure of good mothering in the women's eyes, for which they receive positive reinforcement from their children. Making healthy decisions on behalf of their children which may meet with persistent opposition, demands highly skilled parenting; how disadvantaged women manage such conflicts with their children over food choice needs further exploration.

Conversely, in a study investigating barriers to Australian women eating healthily within the family context, it was found that women with children saw increasing fruit and vegetable consumption as more feasible to achieve than other women (93). It could be that an increased sense of responsibility towards ensuring healthy food is available in the household for children, has a positive effect on a woman's perceived ability to change her own and her family's eating behaviour. Counter-intuitively, there were no differences in perceived feasibility of healthy eating between women of different levels of educational attainment. This might be due to the collapsing of the data into just two categories, being tertiary (or university)-educated or not. Findings from the SWS showed a strong linear relationship between level of education and dietary quality (32). Thus women who left school with no qualifications had poorer diets than those who left school at 16 years with GCSE's, who in turn had poorer diets than those who left at 18 years with A Levels. It is therefore important to be cautious when simply grouping women into two levels of educational attainment without checking for differences

across all levels. There is no information in this Australian study that would enable these more detailed comparisons to be made, and the authors suggest that their education variable may not have been sufficiently sensitive to detect differences. Research in this area needs to provide more information either about the differences across all levels of educational attainment, or on the implications of grouping those with varying levels of educational attainment.

It is also known that the presence of others at meal times causes an increase in meal size (94-96). Meal size is associated with the number of people present, not just with their presence or absence. More food is eaten when dining with family and friends, rather than colleagues, and family meals tend to be larger and eaten more quickly, probably because of relaxation and disinhibition. The notion of disinhibition predicts that the better known the companion, the greater the relaxation and thus the greater the facilitation of intake. Meals with friends are also larger, but last longer, and women have been shown to eat more in the presence of males than females (96). The authors suggest that these findings might have important implications for families, as it would appear that eating alone might be healthier for women, because these meals are lower in calories and fat than those eaten with others. Whilst these findings clearly demonstrate the importance and significance of social influences on food intake, it is not a feasible or desirable option to suggest disbanding family mealtimes in favour of solitary eating! Nevertheless, as family eating patterns are clearly an influence on individual food choices, it is important to understand more about their effects.

Food and eating are central to domestic harmony. The way social relationships and household food provision are managed by women is likely to have been learned through early life experiences and life events. These personal food systems then inform a food trajectory which is affected by life transitions from one social group to another, such as leaving home, living with a partner or having children. The next section describes how these life events might affect an individual's food choices, in order to understand how current practices reflect what has gone before.

2.5 Historical influences on women's food choices

It has been suggested that food management processes rely heavily on tradition, but are also open to individual innovation and improvisation (97); over their lifetime, individuals develop strong beliefs and feelings about the way they should be eating and providing food for others. Memories from childhood provide images that remain

throughout adulthood; thus homemade or mother's cooking might be used as reference points for how food should be prepared and taste (97). The role of tradition and the women's past experiences are likely to be key influences on how she considers food within her family; what she is prepared to buy, prepare and cook might be constrained if her experiences are limited or negative. It is not clear whether these types of experiences are more common for disadvantaged women.

Individuals bring their past events and experiences to every food choice they make. These experiences are therefore strong influences on personal systems for food choices (90;98). The thoughts and feelings associated with those choices, and the temporal, social and historical contexts that helped shape them, make up peoples' life course trajectories of food choice. A food choice trajectory is defined as a person's *"persistent thoughts, feelings, strategies and actions with food and eating developed over the life course in a social and historical context"* (98)p122. Thus food choice trajectories, such as a fruit and vegetable trajectory, lead to habitual food selections that can affect how individuals adjust to transitions such as ageing and health changes (62). Trajectories are relatively stable over time; with the exception of some transitions, there are few major turning points. A transition occurs when people move from one state to another. For instance, individuals report making small adjustments to their food choices to adapt to new settings that emerge from normal life transitions, such as leaving home or getting married. However, major turning points in food choice trajectories are rarely reported and are generally marked by drastic changes in people's lives, such as life-threatening disease or death of a close family member (90;98). It has been found that participants' fruit and vegetable trajectories were shaped by seven major types of experiences and events over the life course: food upbringing, roles and role transitions, health, ethnic traditions, resources, location and the food system – defined as diet and health information related to nutrition that changes across the lifespan (90). It is argued that future research needs to go beyond examining only current psychosocial characteristics of individuals, to explore their interaction with historical events and environmental factors. Current food choices cannot be understood without delving deeper to understand how these eating habits have developed and changed.

Women have special relationships with and responsibilities for food and nutrition, particularly within the family (99). Food experiences early in life are a prominent factor in shaping their food provisioning skills, and provide lasting "food roots". Food preferences develop at a very early age, and repeated exposure to a variety of foods enhances the probability that this taste for a wide range of foods will be maintained

throughout life. The number of exposures varies with age, with infants sometimes only needing one exposure before developing a preference for a particular food (100). As children get older, it takes around eight to ten exposures (101-103), and in adulthood it takes many more exposures to accept a flavour previously disliked (104). Thus the tastes experienced by individuals in early life will largely determine the foods they eat as an adult, and habits, once acquired, are hard to break. Women's lifetime experiences are therefore likely to be impacting on the choices they make for themselves and their families, perpetuating either a narrow or broad range of foods consumed. Positive childhood experiences lead to women having more positive trajectories leading to lifelong healthier food consumption, with some of these positive experiences being passed onto their own children (66). Women who have learnt to cook themselves early in life may be more likely to teach their children to cook. Foods disliked or not featuring in childhood, tend not to be incorporated into personal food systems and remain uneaten (90;98). If women have negative memories of being forced to eat certain foods, or having to sit at the table and abide by mealtime rules, they may make different choices around food and mealtimes for their own families, leading to a less traditional or disciplined approach (66). This is likely to impact on many food-related experiences for the family, and ultimately the quality of their diet, and thus needs investigating in disadvantaged women.

To understand women's current food choices, it is important to assess how the meanings and norms associated with food and social locations may have changed over their lifespan (98). As has already been identified, social relationships such as those with parents, spouses and children, are important influences on personal food systems, and rarely remain stable over time. Changes in young women's domestic situations as they leave the family home, enter a marriage/partnership, or have children, have been found to have a major influence on their ability to adopt or adhere to healthy behaviours such as diet and exercise (105). Life transitions such as these can elicit both positive and negative impacts on food choices and eating, as a result of altered social, financial and household support (97).

Pregnancy is one particular time of social, psychological, behavioural and biological change for women; a time when health and nutrition concerns become more salient. Specific recommendations related to food and nutrients are made, aiming to achieve the birth of a healthy infant (106). Women may change their behaviour during pregnancy, but may also revert to their prepregnant behaviour after the birth of their baby. Research has shown that compared to prepregnancy, women increased the amount of fruit and vegetables they consumed, and were more likely to eat breakfast

every day during pregnancy (106). There were also significant differences in these behaviours by socioeconomic status, so that those with lower income were less likely to be engaging in these more positive eating behaviours. However, the biggest increase in fruit and vegetable consumption and in eating breakfast every day was seen in those with low income compared with higher income women, although levels did not catch up with the latter. Thus the more disadvantaged women were making the greater change to their diets. First-time mothers engaged in less positive food choices than experienced mothers during pregnancy; however by two years postpartum, they were at similar levels. It appeared that in those two years, first-time mothers had adopted the same normative expectations related to the motherhood role as those more experienced parents (106). The life course transition into parenthood is often a time of dietary change and may be a window of opportunity for interventions to improve food choices, particularly for disadvantaged women, where the potential for improvement is greatest (106).

In contrast, other recent research looking at tracking changes in prudent diet scores (high scores reflecting a diet in line with current healthy eating guidelines) from prepregnancy through early and late pregnancy, found little change in scores overall (107). Decreased consumption of rice and pasta, vegetables and vegetable dishes was observed, alongside increases in consumption of white bread, cakes and biscuits, red and processed meat, crisps, confectionery, full-fat spread and soft drinks. But their influences on prudent diet scores were offset to a large extent by increases in consumption of breakfast cereals, fruit and fruit juices, dried fruit, and cooking fat and salad oils, that were positively associated with the prudent diet score, and decreases in intake of tea and coffee. These findings suggested that women were able to respond to dietary public health messages in pregnancy as demonstrated by reductions in liver and kidney, and caffeinated drink intake. However, the overall quality of the diet, as measured by the prudent diet score, had not improved. Appropriate nutrition during pregnancy is an important public health issue, and therefore interventions to improve dietary quality may need to take into account reasons for changes in diet such as nausea and changes in appetite. With concerns about health and nutrition being more salient for women at this time, they may well be more receptive to healthy eating recommendations. The challenge is to translate this receptiveness to recommendations into action, understanding why this is more difficult for some women than others. The evidence is clear that such improvements in diet will have a positive impact not just for the women, but for their infants and family.

Understanding more about how past experiences, food trajectories and transitions interact with environmental, social and psychological factors is clearly an important part of understanding why disadvantaged women make the food choices they do. The literature to date is lacking in this area.

2.6 Psychological influences on women's food choices

Ultimately, the influence of all other factors operates through food choices made by the individual. For this reason, and because of the principle of individual responsibility that has underpinned most public health initiatives to improve quality of diet, a great deal of research has been undertaken to explore a range of psychological concepts that might be determinants of food choice. As indicated earlier, psychological theories of behaviour have developed in an attempt to explain the adoption of health behaviours, so might offer insight into predictors of healthy eating.

2.6.1 Psychological theories of behaviour

Researchers have proposed various theories of behaviour which may be useful in guiding this review of the psychology literature on food choice, and later in the interpretation of the data collected. Theories that offer insight into possible mechanisms of health behaviour change may highlight important areas to be considered in developing an effective intervention.

Over the years, psychologists have developed many theories and models to try and explain health behaviour and understand what shapes it. These generally provide a rational view of why people adopt the health behaviours they do, suggest why they do or do not make changes, and why they then maintain these changes or relapse to their previous behaviour. From this approach, researchers have elaborated an extensive list of psychological, social and environmental influences on various health behaviours (108). It is clear changing these behaviours is a complicated process that involves all these influences. Encouraging individuals to change their behaviour has thus proved to be difficult, despite the repeated application of many psychological theories of behaviour change. The problem with studying eating particularly as a behaviour under the control of the individual, is that it exaggerates the extent to which people's food choices are rational and conscious, and underestimates the extent to which eating is embedded in every-day life, and is therefore routine and often unconscious (78). Individuals are unaware of many decisions they make and are unwilling to acknowledge that environmental influences (such as size of bowl, or how far away it is)

have any impact at all (109). Eating patterns develop within an eating environment, defined as the ambient factors that are independent of food, including atmosphere, the effort of obtaining food, time of day and the social interactions that occur (109). These social interactions are viewed as those daily activities that take place in family groups, work and school, which take place alongside eating activities. Hence, whilst eating involves individual choice, this choice is moulded by the context in which it occurs. Psychological theories of behaviour traditionally pay more or less attention to this context.

Three of the most widely tested theories are the Theory of Planned Behaviour (110), Social Cognitive Theory (111), and the Transtheoretical Model (112). The literature is full of examples of these theories being used to explain many health-compromising and health-promoting behaviours. These theories aim to explain the processes involved in the adoption of health behaviours and the attitudes underlying these. This thesis does not aim to explore these theories in depth, but will briefly review them in order to assess their usefulness for later phases of this research, such as informing intervention design.

Social psychological approaches to food choice suggest that attitudes and expectations are key to explaining proximal determinants of food choice. For instance, Expectancy-Value theories, such as the Theory of Planned Behaviour (110), have been widely applied to understanding food choice and, like many other social psychological theories, are based around the assumption that humans are rational creatures, making decisions based on a logical weighing up of the risks and consequences of an action. These decisions are said to be mediated by individuals' attitudes towards the causes and consequences of their actions, their beliefs in their ability to carry out the desired behaviour, and their perceptions of the societal norms surrounding such behaviour (110). Thus it is suggested that people are more likely to change behaviour if you can change their attitudes about the behaviour, increase their belief that they can undertake the behaviour and raise awareness about others' similar to themselves carrying out the behaviour. It is clear that theories such as the Theory of Planned Behaviour have a strong individualist flavour, perhaps acknowledging the environmental context to a lesser extent.

One model that takes account of environmental impediments and facilitators to change more than some of the other models is Bandura's social cognitive theory (111). This theory explains human behaviour in terms of a dynamic and reciprocal interaction

between behaviour, personal factors (impacting on rational decision-making) and environmental influences (66). Importantly, it also offers principles to guide behaviour change (113). Most other models of health behaviour are concerned only with predicting health habits, but do not specify how to change health behaviour. Social cognitive theory offers both predictors and principles on how to inform, enable and motivate people to adapt habits that promote health and reduce those that impair it (113). Self-efficacy – the confidence in one's ability to carry out an action – is a central construct in the model. It is proposed that influences on self-efficacy include mastery and vicarious experiences, affect and social persuasion (111;114).

Mastery experiences refer to the impact of previous successes or failures on how much individuals will persevere when the going gets tough. In relation to nutrition, if women feel they have not had previous success in providing healthy meals, they may question their cooking skills. The likelihood is that they and their families will therefore be eating less healthily, and that they will not be able to pass on skills to their children when they are old enough to be preparing meals for their own families. A study of low-income mothers in London found that that those who enjoyed cooking and cooked from fresh ingredients most days had more healthy diets (17). Hence, learning to cook provides skills that can enhance self-efficacy, which is an important prerequisite for eating healthily.

Vicarious experiences are provided by seeing people similar to oneself succeed; this can raise the observer's belief in their efficacy (114). There is evidence that parents, especially mothers, can exert influence on their children's eating habits long after they have grown up (115). It was found that 69% of women believed they had adopted the eating habits of their mothers and 47% thought their daughters had adopted eating habits from them. If a mother's eating habits are limited, then their children's are also likely to be, thus setting a life-long food trajectory lacking variety. Other research has established that parent-child snacking habits and fruit and vegetable intakes are highly correlated (116). Having positive role models demonstrating how healthy eating can be achieved is important if women are to believe it is possible for themselves.

Social persuasion refers to how others can help build an individual's efficacy by not only providing positive appraisals, but by structuring situations that enhance the chances of success and self-improvement (114). There is evidence that encouragement from others is related to increased fruit and vegetable consumption (81); this provides a rationale for support group initiatives. Finally in regard to

influences on self-efficacy, an individual's *affective state* has an impact, whereby positive mood or well-being can enhance it and negative signals such as fatigue and stress can diminish it (114). A lowered sense of control can impact on measures of well-being, such as self-esteem (117) which are in turn linked to quality of diet (118). Women are also more likely than men to report feeling helpless in relation to their food habits (119).

Some of the perceived *impediments and facilitators* to change are external to the individual, and these sociocultural factors are also a key part of Bandura's model (114). For instance, the cost of food has been identified as a potential *impediment* and a major factor in reducing variety and balance in the diets of lone-parent families (17). Buying food because it was cheap, and only buying food that children would eat, were strategies that low-income parents adopted to ensure that their families were adequately fed. However, these were also strategies that were associated with eating a less healthy diet. Social support is a key *facilitator* of behaviour change (114). It is defined as the degree to which a person's basic social needs are gratified through their interaction with others (117). Social needs include esteem or approval, belonging, identity and security. These may be met by the provision of socioemotional aid, such as affection or understanding from significant others, or instrumental aid, such as advice or help. Social support networks influence personal food systems and choices (90), as does a woman's perception of her role within the household and her other social networks. Furthermore, positive nutrition attitudes and social interaction behaviours in the household have been found to increase with increasing education (120) which we know is related to eating a better quality diet (32).

Finally, an individual must believe that any action they take will make a difference to the desired outcome and this is included as *outcome expectancies* in Bandura's model (114). If an individual does not believe that eating a balanced, varied diet will lead to long-term health benefits, they will not be motivated to change. Research has shown that beliefs about the health consequences of increasing fruit and vegetable intake are more important than the belief that the behaviour can be performed successfully (40;121). Thus, it may be that the outcome expectancies of disadvantaged women reflect a belief that eating healthily will provide few benefits. This needs to be investigated in this population, and if it is the case, women may need to be made more aware of the link between diet and health if they are to make positive changes to their eating habits.

It has been suggested that no single theory can account for all the complexities of human behaviour change, and that an integration of major theories would be necessary to produce a more comprehensive model (112). The Transtheoretical Model is one that attempts to integrate concepts from multiple theories and is one of the most widely cited 'stage of change' models. It describes how individuals are in one of five stages of readiness to change, from *Precontemplation* (no intention of change), *Contemplation* (considering change in the next six months), *Preparation* (preparing to change in the next month), *Action* (having changed behaviour in the last six months) to *Maintenance* (having maintained new behaviour for more than six months) (112). The allocation of individuals to a stage of change is the central organising principle of the transtheoretical model, and as such is the most widely reported and utilised aspect. However, it is only one of five primary constructs which the model suggests play a role in the behaviour change process. The others are: decisional balance (an individual's relative weighting of the pros & cons of changing); self-efficacy; temptation (linked to affect or distress, social situations and craving); and the processes of change. Processes of change are the cognitive-experiential and behavioural strategies or activities people use to progress through the stages, and can provide important guidance for intervention programmes. Some of the processes receiving the most empirical support include: consciousness-raising (increasing awareness of causes and consequences); self-reevaluation (assessments of one's own self-image with or without the problem behaviour, such as 'couch potato' versus 'active' person); self-liberation (belief and commitment to change based on willpower or motivation); counter-conditioning (substituting problem behaviours with healthier ones); stimulus control (removing cues to unhealthy habits, or self-help groups to support change) (122). These processes can be more or less useful depending on an individual's current readiness to change, which has given rise to the tailored approach of stage-based interventions.

One of the advantages of the Transtheoretical Model is the potential for combining predictions of the stage model with other approaches to health behaviour change. Because the model uses a temporal dimension, the stages of change, it can specify when attitudinal-based interventions will be most effective, and how best to utilise principles of change from other theories (122). Stage of change models have been used in a broad range of health behaviour investigations and interventions, including smoking behaviour and cessation (45), and are popular in health promotion, as they are simple to understand and apply. However, they have had mixed success in bringing about behaviour change (123). The value of a stage of change approach in designing an intervention is that is enables information and/or services to be targeted

appropriately according to readiness to change. However, any intervention with our target population first needs to understand disadvantaged women's lives and beliefs, before starting to think about the processes involved in bringing about change.

Translating knowledge about processes involved in the adoption of health behaviours into effective interventions to change behaviour has proved troublesome. Psychological factors generally only predict a small percentage of the variance between groups, as external factors also play an important role. If a theory is to be relevant to food choice it needs to take account of a range of factors beyond just psychological ones. The discipline of public health now recognises health as a social phenomenon, as well as a biological and psychological one (78). Recognising the limited success of behaviour-based nutrition education approaches to changing population eating patterns, sociological studies of food aim to explain eating patterns among social groups in relation to the sociocultural context (78). What someone eats can be contrary to what they know they like, report eating or would prefer to eat (108). Thus, it is not useful to think entirely in terms of the human population as individuals, but instead identify a person in relation to others. Social relations are said to make up the basis for understanding the social world, and are comprised of social structures such as race, class, gender, organisational practices, collective and individual behaviour and personal biographies (78). Eating patterns are understood to reflect systems of meaning constructed by people. By examining eating as social practice, it may be possible to comprehend the underlying social relations which connect people in the social world and generate population eating patterns.

2.6.2 Psychology of choice

To understand how certain factors might influence food choice, it is useful to draw on some of the research on consumer choice generally. Presented here is a brief overview of the work of Gabriel and Lang (124). Whilst this presents just one viewpoint on consumer choice, it sets a backdrop for moving on to consider food choice more specifically.

The structure of society today is based on the consumer as chooser, and whilst there are advantages of choice, there are important limitations: choice without information is not real choice (what sort of information is appropriate, how much and given by whom?); choice limited only to those with resources undermines the advantages of choice for all; overabundance of choice leads to fear of failing and worries about choosing the wrong option; choice can be used as a smoke screen for shedding

responsibility - thus if one actively chooses a particular option, one is expected not to complain when it goes wrong (125).

Underlying all these ideas about choice, is the assumption that it is undertaken on rational grounds, allowing little for randomness or whim, and what to economists might appear emotional or unreasonable behaviour. So an individual is conceived as rationally deciding on actions in response to multiple influences (78). But whilst individuals may weigh up the pros and cons of undertaking a given action, this is not necessarily based on logical reasoning, and will be driven by their own experiences, circumstances and mood.

In today's western society, people rarely live with an extended family from whom they might learn, perhaps via modelling, how to approach purchasing and what to buy. Thus they may lack the knowledge base for making informed choices. Instead they are surrounded by messages that undermine their ability to make autonomous judgments (126). In theory consumers can be helped with information, but in practice choice is often a stab in the dark, with subsequent knowledge gained sometimes undermining confidence in prior choices. Choice, where it exists, occurs within limits, has a downside and is often a political affair. In practice there is a tendency for markets to be dominated by large producers and for information to be dominated by the interests of the retailers (9;127). How does this view of general consumer choice relate to food choice specifically?

It is clear that food choice is dependent on a wide variety of factors, and indeed has been defined as:

> *"the selection of foods for consumption, which results from the competing, reinforcing and interacting influences of a variety of factors. These range from the sensory, physiological and psychological responses of individual consumers to the interactions between social, environmental and economic influences, and include the variety of foods and the activities of the food industry to promote them" (128)p334.*

Food choice involves the selection of food items, and is structured by rules and resources which limit the range of options. Consumers are faced with an abundance of messages and recommendations regarding their food choices, which may appear to change and conflict over even short periods of time. It is suggested that consumers do

not always follow these recommendations, and research shows that they respond less favourably when nutrition messages conflict with individual taste preferences, or are negative, encouraging them to “cut down”, “eat less” or “avoid” certain foods (129). The confusion caused by contradictory, sometimes incorrect and misleading, information appearing in the media can result in apathy or increased anxiety, which has led to consumers becoming sceptical about nutrition messages (58). The public also report being confused by standard health messages relating to portion and serving sizes, so are uncertain how to use the information they are given, even from reliable sources (130).

> *"The plethora of nutritional ideas carried by the mass media is a good example of postmodern vitality - and confusion. It is hard for many consumers to know what is ‘true’ and what is not”. (56) pS106*

Many of the choices that affect our health are choices we make as consumers, based on information gleaned from many different sources such as family, friends, product labelling, media and national campaigns (131). A recent survey found that respondents who mentioned the family as a key influence on food choice, were more likely to mention eating more fruit and vegetables as part of a healthy diet. Those who stated that they did not have any source of information about diet were less likely to mention balance and variety or less fat or more vegetables (30).

From the stance taken by policy makers and health promoters, it is clear that they assume individuals wish to maximise their health status, and make decisions about their diets in a rational and calculated way. However, individuals are not always motivated by associations between diet and health, nor do they always perceive a need for change if they believe themselves to be at less personal risk for future disease outcomes. They may not think much about what they eat until changes in their life make them more aware; for example, in family structure, finances or health (56;132). Nevertheless, there is evidence that consumers are becoming increasingly aware of, and interested in, the relationship between what they eat and their health (58). This is reflected in the number of items about diet, nutrition and health appearing in the media and the growth in sales of “healthy options” in the shops. The British Heart Foundation reported that consumption of skimmed and semi-skimmed milk has risen dramatically, whilst butter and whole milk sales have declined since the mid-1970s (133). There has also been a gradual increase in the consumption of poultry, lean meat, low-fat dairy produce, fresh fruit and vegetables over the same period. However, these increases

still show large variations across populations, with those in the lowest socio-economic groups consuming about 50% less healthy foods than professional groups and those in the highest income groups (134). As has already been noted, these differences in health behaviours between certain populations are linked to health inequalities that continue to exist, despite efforts to minimise them.

From understanding how food choice can be conceptualised, this section now focuses on prominent psychological concepts that emerge from the literature as having an influence on food choice. These are control; self-efficacy (how capable people perceive themselves to be at undertaking a given behaviour); attitudes, beliefs, priorities and values; and mood or well-being, including self-esteem (a sense of self-worth) and affect (positive or negative mood).

2.6.3 Control

Control is a key concept in the psychology of health (117). The term "control" is commonly used to refer to both the action and the outcome – having control over undertaking a particular behaviour and over the goal itself. There are two ways in which perceived control could influence health in general. The first is via health-related behaviours, in that people who feel more in control of their lives are generally more informed about health issues and more likely to adopt health-promoting behaviours than people who feel less in control of their lives (135). This includes eating more healthily (136). The second way in which perceived control is believed to influence health is through the direct effect of feeling out of control and demoralised, which suppresses the immune system, raising the likelihood of infection and disease (137). Perceived control has therefore been proposed as an explanatory factor in the relationship between educational attainment and health. Education encourages the ability to gather and interpret information and hence to solve problems. Those with higher educational attainment thereby develop the perception that they can control events and outcomes in their lives, in contrast to those with lower educational attainment (135).

Control has been widely investigated, including research into health locus of control, defined as a specific measure of control beliefs about health (138). At its core is the notion that individuals can either attribute responsibility for outcomes to themselves (internal health locus of control), significant others (eg health professionals) or chance (or fate) – the latter two both being aspects of external health locus of control. It has been suggested that chance is the opposite pole on the same dimension as internal

locus of control. High scores on powerful others locus of control is not necessarily a bad thing, as a willingness to seek help from others and take advice under certain circumstances can be adaptive.

The most consistent finding in health locus of control research is that attributing responsibility for health to chance is associated with lower socioeconomic status, poor motivation to engage in preventive or protective health behaviours, and the adoption of more health-compromising behaviours such as smoking, sedentary lifestyles, and low fruit and vegetable consumption (138). These in turn are clearly related to poorer health outcomes. Women of lower educational attainment and low socioeconomic status are more likely to feel that their future health is a consequence of fate or chance rather than something they can control (138). They also believe less in the efficacy of fruit and vegetable consumption as a means to good health (40). Similar findings emerge for SES, and those with lower SES spend less time thinking about or planning for their short or long-term future (139), indicating stronger external locus of control beliefs. Other research has shown that women with higher levels of education had higher intentions to consume fruit/vegetables, consumed these more frequently, and scored less on the Health Locus of Control chance subscale (40;121). Thus those with higher educational attainment choose healthy foods as they believe they can improve or maintain their health in this way (121). People who scored highly on Health Locus of Control chance believed less in the efficacy of fruit/vegetable consumption as a means to good health, which indicates that high beliefs in chance seem to be demotivating.

If women do feel in control, does this have a measurable impact on the quality of the family diet? To date, the literature in this area is sparse. There is a gap in our understanding of the way that a general perception of control over life translates into control over food choices. It is suggested that perceived control over life in general may have more of an impact on the coping abilities of disadvantaged, vulnerable groups than others (136). Lower educational attainment restricts employment opportunities and economic circumstances, and teaches through experience that unpredictable forces and the decisions of others control life, rather than control lying with the individual (135).

There are other aspects of the notion of control as it relates to diet; for example, control over food availability and access. It is important to understand where the control lies within the household. A woman's perceived control may affect her ability to make

healthy food choices for the family, particularly when those choices are constrained by what other family members will or will not eat. Any attempt to inform, educate and support women will have to acknowledge and engage the rest of the family, as well as improving her feelings of control. Whether these goals are possible, and how they might be achieved will be explored in more detail later in this thesis.

2.6.4 Self-efficacy

Research shows a strong relationship between notions of control and measures of self-efficacy (117). Self-efficacy refers to the ability of individuals to achieve a desired outcome, which affects every phase of personal change – whether people consider changing their health habits; whether they find the motivation and perseverance needed to succeed; and how well they maintain new health habits once achieved (140). Individuals' beliefs that they can motivate themselves and regulate their own behaviour play a crucial role in whether they even consider trying to change health-compromising behaviour. Self-efficacy is fundamental to the achievement of internal control (117). It implies a body of requisite knowledge and skills, which the individual must believe they have. Thus self-efficacy generally refers to perceived self-efficacy, and is an important variable in predicting health behaviour and behaviour change. A sense of self-efficacy is a good indicator of motivation, and thus is used to measure whether interventions will be effective in enhancing personal control. Research has found a positive relationship between education and general self-efficacy, showing that women with higher educational attainment have higher personal control, or efficacy beliefs in both competence and contingency, ie control over both the behaviour and the outcome (40). Although people may believe that outcomes, like health, can be influenced by their own behaviour, they will not attempt to change behaviour unless they believe that they themselves can perform that behaviour successfully. To build a sense of self-efficacy, people must develop skills on how to influence their own motivation and behaviour. Programmes to enhance self-efficacy help individuals to monitor the behaviour they wish to change, show them how to set attainable sub-goals, and how to enlist social support (141).

Certain processes have to occur for the successful provision of food to a household, involving food acquisition, storage, preparation, cooking, service and disposal, as well as organisation and co-ordination of time, tasks and household eating schedules. These tasks can all be viewed as sub-goals along the route to the final goal of a harmonious family mealtime. These tasks almost always fall to the woman in the household and the successful completion of each action may depend on her level of

self-efficacy towards achieving it. Success at each stage may in turn increase self-efficacy, creating a positive upward spiral.

There are some mixed findings with regard to the role of self-efficacy in eating patterns. In studies of people living in low-income neighbourhoods, higher perceived self-efficacy was found to be related to greater self-reported consumption of fruit and vegetables (139). Short-term increases in the self-efficacy of individuals with low income were found to predict long-term changes in fruit and vegetable intake (81). Conversely, a study looking at fruit intake in Norway, Austria and Spain found no evidence of a direct relationship between children's self-efficacy and their eating behaviour (142). This may be to do with children being less able to plan ahead and having limited autonomy and influence over food choices. The authors perceive fruit consumption as a complex behaviour, as different fruits are eaten at different times of day for different reasons. Choosing a range of foods to sustain a family throughout each day, can therefore certainly be viewed as complex. Hence, these arguments can equally apply to young women of lower educational attainment, who may also experience a lack of planning and control in their lives. Research needs to find out if there is evidence to support this speculation.

Whilst having high perceived self-efficacy might be important in ensuring health-promoting behaviour is adopted, it is also important to the adoption of the behaviour that individuals view good health as an important personal goal. Most messages promoting a varied and balanced diet are focused on benefits for good long-term health. However, this may not motivate everyone to adopt a better diet, and we need to understand more about other motives people have for eating the way they do.

2.6.5 Food choice values and beliefs

Values are often identified as important influences on food choices and provide scripts for food behaviours (63). They are defined as the enduring beliefs that guide and motivate behaviour, and dictate the considerations that people weigh up when making food choices. The most frequently cited food-related values have been found to be health, taste, cost, convenience and managing relationships (63). These values are often in conflict, requiring individuals to try to ease the tension of conflicting values and minimise feelings of guilt about food-choice decisions. Any value has the potential to be the deciding factor in a given situation, and sometimes values are in harmony. But when conflicts among values occur, one typically emerges as dominant. Values have to be prioritised and compromises made, often leading people to choose less healthy

options under certain circumstances. Women appear to be more likely to compromise their food-related values than men, placing social relationships first when faced with conflicting food-choice values (63). They are likely to strive to preserve household harmony regarding food issues, suggesting that managing relationships may be their most important value. The desire for pleasant mealtimes means that managing social relationships is prioritised, sometimes to the detriment of health. When change or new information occurs, people struggle to redefine when and what values are most important, how different foods align with values, such as healthy, convenient, cheap, and even what constitutes a meal (63;97). Comprehending how an individual categorises, prioritises and balances their food-choice decisions is key to understanding their personal food system.

As well as the role of this personal food system, health beliefs such as risk perceptions related to disease and illness, optimistic self-beliefs, and outcome expectancies are said to be key in determining nutrition behaviour (143). Individuals often believe others are at higher risk than they are themselves for a range of negative outcomes, which has been coined “unrealistic optimism” (144). If they feel invulnerable to risks such as illness caused by an unhealthy diet, they are unlikely to change their eating behaviour. Optimistic self-beliefs shape the goals people set for themselves and how much effort they invest and for how long (143). Even when individuals perceive themselves to be at risk and believe they can change their behaviour, they will only do so if they think that the change will bring about a desired outcome, such as good health. Outcome expectancies reflect a belief that a given action will lead to a certain outcome, and are likely to play a significant role in determining the adoption and maintenance of healthy behaviours. Expectations about the outcome of events or actions related to eating specific foods have been measured using the Food Expectancy Questionnaire (145). The authors explored relationships between this questionnaire and a food frequency questionnaire and found that food expectancies accounted for a significant amount of variance in reported dietary intake. Positive outcome expectancies (such as relaxed, rewarded, comforted) were more strongly related to chocolate and sweet consumption than for other foods, suggesting that expectancies may be food or meal specific. It appears food expectancies may be useful in understanding and predicting some eating patterns (145;146). Many people appear not to understand the link between diet and certain diseases, and hence are not motivated to eat healthily (66). It may only be when they experience ill-health themselves that they consider making changes.

The literature is not clear about whether it is possible to change outcome expectancies or the priority people give to different values, or indeed if raising the priority given to

health would have a measurable impact on food choices. However, understanding the value given to health, its relationship with nutrition, and the health beliefs individuals hold, will be important if improvements to diets are to be brought about. This suggests that interventions to improve diet may need to highlight a range of possible benefits, not simply the attainment of good health.

2.6.6 Mood and well-being

Psychological studies of the effect of mood on behaviour often concentrate on the concepts of affect and self-esteem. These factors are measurable aspects of psychological well-being, and are known to influence behaviour. An individual's mood may shape their priorities and values and it is suggested that an individual's affective state will affect their judgment of their capabilities, and of their personal efficacy (97). In particular, negative affect is likely to reduce an individual's perceived self-efficacy and personal control, and thereby reduce the likelihood that they will attempt to undertake a desired action.

It is suggested that having good food management skills provides people with self-esteem, and a feeling of empowerment within the household (97). Food management skills appear to be durable resources that help people meet personal food-related goals and adapt to changing circumstances, thus generating self-esteem. Other research has shown that dietary habits are related to nutritional attitudes and emotional distress. Using the Nutrition Attitude Scale, which measures attitudes towards the adoption of a low-fat, low-cholesterol diet, it was found that participants scoring highly on the 'helpless and unhealthy' factor ate more meat, were overweight and had a poorer physiological profile (119). They also reported more symptoms of emotional distress and a history of more medical symptoms, indicating that a cluster of negative food attitudes is related to poorer psychological and nutritional status as well as weight and actual physiological measures of coronary risk. Furthermore, individuals reporting high levels of stress are more likely to be eating fast food or takeaway food, as well as drinking more alcohol (147). Consistent with ideas of emotional eating, it has been found that some people increase their intake of sweet foods in response to feeling upset or under pressure (147). However, those who report choosing foods that make them feel good will eat more sweet foods irrespective of reported stress. Individuals with positive affect have been found to be more willing to try different foods, which is likely to result in a more balanced and varied diet (148).

A growing body of literature supports the idea that a major influence on women's diets is their desire to control their weight (149-151). The focus of this research tends to be the relationship between cognitive dietary restraint (active weight control), dietary disinhibition (loss of control over eating under certain conditions, such as emotional distress) and food choice. Contento et al found that Latina mother's with higher cognitive dietary restraint made healthier food choices for themselves and their children, whereas high dietary disinhibition was associated with less healthy choices (149). These findings again highlight the importance of mothers' dietary patterns on their children's diets; they provide or make available to their children similar food choices as for themselves, and set an example through their own eating. Other research found that postmenopausal women with high restraint and low disinhibition levels generally showed the most healthy dietary pattern (150). These studies suggest that dietary consumption of specific food and drink may be related to particular eating behaviours, and that dietary restraint may be a form of necessary cognitive self-regulation; whereas high disinhibition may lead to over-eating which is of greater concern (149). The role of education in predicting these patterns of eating in young women is not well understood.

Related to dietary restraint is the concept of body image and body dissatisfaction. It is argued that for women particularly, body image is an important aspect of how they see themselves, and that choosing to be a chronic dieter is a means of regulating how they are feeling as well as enhancing their self-image (152). Body dissatisfaction is commonplace for teenage girls particularly and is associated with some unhealthy weight-control behaviours and excessive dietary restraint (153). This alternate view of the role of cognitive dietary restraint in certain populations is a reminder that food choice is subject to many competing, contradictory and non-health-related determinants, such as images in the media (153). Additionally, adolescent girls who scored highly on the Eating Attitudes Test – an indication of a possible eating disorder – showed lower levels of self-esteem in general, and in relation to their family and body image (154). It is suggested that improving self-esteem may be one way of preventing young women from developing eating disorders (118), highlighting how important high self-esteem is in regard to eating healthily.

All these findings on differing aspects of mood suggest it is prudent to understand the links between an individual's emotional state and their food choices, and that these links may differ from one population to the next.

2.7 Aims of this thesis

The evidence presented in this chapter highlights the complexity of understanding what determines people's food choices and therefore how to help them improve their diets. This complexity is due to the fact that there are many interrelated factors influencing food choice; hence improving food choices will require more than simply educating individuals about the link between diet and health. Many of the factors outlined in these two chapters will need to be addressed if we are to improve the diets of disadvantaged women and their families. To reduce inequalities in health, the most vulnerable populations who experience the poorest health outcomes have to be targeted. We know that young women's diets and nutritional status are important in determining the health and well-being of generations to come, which makes them a key focus of efforts to improve diet and nutrition. We therefore have to understand what influences their food choices. We need to identify and address the barriers that prevent disadvantaged women improving their diets, and ensure they have support to empower them to make changes.

Whilst there is a substantial body of literature identifying many different influences on food choices, there is little known about how educational attainment mediates these influences. We know that women of lower educational attainment are more likely to be eating poorer diets, and that this leads to a downward spiral of ill health and disadvantage for the next generation. We need to understand how the different environmental, social, historical and psychological factors work together to influence food choice in this population. The best way to begin this process of understanding is to explore these women's lives in more detail and so understand their lived experiences.

This research project has three aims:

Aim 1: To understand the influences on the food choices of young women, and how these differ for women of lower and higher educational attainment.

The first phase of this study will be to conduct focus groups with women of lower educational attainment, living in disadvantaged areas of Southampton, to investigate what factors influence their food choices. Chapter 3 of this thesis describes the

conduct and results of the focus group study. Discussions with women of lower educational attainment are compared with those with women of higher educational attainment, to identify key influences on their food choices.

Aim 2: To measure the impact of key social and psychological influences on the diets of women of lower and higher educational attainment.

The second phase of this study will be to carry out a questionnaire survey of young women living in disadvantaged areas of Southampton, to investigate what factors influence their diets. Chapter 4 describes the conduct and results of this survey – the Nutrition and Well-being Study. The relationship between factors identified in the focus groups and diet will be measured in a larger group of women.

Aim 3: To explore how the findings from phases one and two could be used to inform an intervention to improve the diets of disadvantaged women.

The third and final phase of this study will be to conduct an expert panel focus group with practitioners from Sure Start Children's Centres in Southampton. Chapter 5 describes the conduct and results of this expert panel focus group. Participants' experiences of working with disadvantaged families, and views on how we might translate our findings into an intervention to improve the diets of disadvantaged women will be investigated.

These three data chapters will rely on the literature reviewed in Chapters 1 and 2.

Chapter 3

What influences the food choices of women with lower educational attainment? A focus group study

3.1 Introduction

Chapter 1 highlighted the importance of diet in young women for the health of the next generation. It is clear we need to improve the diets of disadvantaged women in particular, if we are going to reduce deaths from coronary heart disease, obesity, osteoporosis and other chronic conditions in future generations. Given the literature presented in Chapter 2, this research project considers educational attainment to be a key influence on diet and health, and a marker for disadvantage generally. Therefore it is particularly important to understand why women with lower educational attainment make poorer food choices than women with higher educational attainment. Chapter 2 reviewed some of the theories about, and influences on, food choice. Despite the volume of research undertaken in this area, little is known about the role of educational attainment in determining patterns of diet. One view is that the experience of moving away from home to attend university broadens people's ideas about food (155) making them more likely to eat a varied diet. Practical, social, psychological and emotional skills that may be needed in order to make good choices for achieving a full and healthy life are gained by education (15). This includes skills in developing relationships and dealing with conflict, which may be important in making optimum food choices for a family. Education is also a determinant of an individual's socio-economic status, which in turn influences income, housing and other resources which are related to the health behaviours adopted (15). A deficit of any of these has the potential to impact on quality of diet. It is also suggested that less educated people tend to cling to more traditional ways, which may reflect poorer eating patterns, rather than making changes based on newly acquired knowledge (39).

Aim 1: The first aim of this research project is to understand the influences on the food choices of young women, and how these differ for women of lower and higher educational attainment.

This chapter presents the findings from a series of focus group discussions.

3.1.1 Focus groups - rationale

3.1.1.1 The contribution of focus groups to public health

Because food choice is an extremely complex behaviour (156), focus group discussions were chosen as a means to begin exploring the issues with young women. Qualitative research has a huge amount to contribute to the fields of health, medicine and public health (157), with qualitative methods increasingly being used to explore food and eating (86). Surveys, such as the Southampton Women's Survey (SWS), are observational and useful in highlighting associations between patterns of diet and other variables (32). Hence we know that women in this survey with no educational qualifications were more likely to be eating unvaried and unbalanced diets, with dietary quality improving with each increase in level of educational attainment. However, surveys like this cannot explain why these variables are related. Focus group research elicits people's own explanations of why they behave in the way they do and can explain the associations found in observational studies. In this study focus groups were chosen to provide insight into what influences and sustains food choice and dietary patterns.

Focus groups have become a popular way of examining public understanding of illness and health behaviour (158;159). They are used to gain understanding so decision-makers can make informed choices, for instance in the development of intervention programmes. Focus groups can be useful in many circumstances, such as when the aim is to: explore a range of ideas or feelings that people have about something; uncover factors that influence opinions, behaviour or motivation; pilot test ideas, such as for interventions; glean information to shed light on quantitative data collected previously. All of these aims are relevant to the current study. Focus groups are ideal for exploring the complexity surrounding food choice and dietary behaviours within the context of people's lives, and for encouraging participants to engage positively with the process of research. If one of the purposes of using focus groups is to help inform the design of an intervention, it is clear that involving members of the target population in the research process itself may well be beneficial. Public health policy makers increasingly emphasise the potential of complex interventions, whilst still often attempting to force these interventions into linear medical models of causality using experimental approaches (157;160). To effectively address health inequalities, interventions need to be evidenced-based, building on information gleaned from the target population. Those facing the worst inequality are those living in the most

disadvantaged circumstances, and a qualitative approach is able to provide insight into these individuals' lives.

Focus groups are often combined with other data collection methods, as focus groups can be used to test phrasing of questions in questionnaires, or can explore questionnaire data in more detail. For the purposes of this research project, the findings from the focus groups were also intended to inform the development of a questionnaire for the next phase of data collection. In multimethod uses, focus groups typically add to data collected from other methods. The goal is to use each method to contribute something unique to the researcher's understanding of the phenomenon being studied.

Meyrick suggests a useful framework for qualitative research, which reflects a pluralistic overview of not only how the research should be carried out, but also how different researchers can demonstrate rigour through a diversity of approaches (157). She argues that the aims and objectives of the research need to be clear and demonstrate, through reference to the literature, why the choice of method is appropriate to answer the research questions. There must be enough detail about sampling techniques, the rationale behind them, and how representative the final sample was of the target population, as well as an indication of theoretical saturation of the issues being investigated. There should also be sufficient detail about how the data were collected, if there were any changes along the way, the way categories were generated and conclusions drawn. The journey from data collection to conclusions is important, including reflection on how the researcher, participant or situation influenced the process. Evidence of feeding back conclusions to the participants is one way of establishing the strength of these conclusions. This all helps establish transparency for the reader to judge if the decisions made and processes used were reasonable. In summary, it is important for the research team to spend time planning the research, and be in agreement on its purpose and their expectations.

3.1.1.2 Group processes

Focus groups not only give access to data on a wide range of topics that may not be observable, but also ensure the information is directly targeted to the researcher's interests. They are in this sense considered to be "quick and easy", and have a reputation of being efficient in comparison to individual interviews for gathering equivalent amounts of data (158). Whilst group interviews are often used as a convenient way to collect data from several people simultaneously, focus groups

explicitly use group interaction as part of the method of data collection. Instead of the researcher asking each person in turn to respond to a question, participants are encouraged to talk to each other, thus capitalising on communication between research participants to generate data. Knowledge is not just encapsulated in reasoned responses to direct questions. Focus groups can tap into many different forms of communication, including jokes, anecdotes, teasing and arguing, which can reveal other dimensions of understanding (158). Aspects of the group interaction can provide insights into group norms and cultural values. The comparisons that participants make between each other's experiences and opinions reflect a more natural environment where individuals influence each other. They can ponder, reflect and comment on these experiences and opinions, allowing them to compare their own personal reality with that of others (161). Participants can also provide mutual support in expressing feelings that may be common to the group, but which they consider deviate from mainstream culture (158). This can take the research in new and unexpected directions. This approach is useful for exploring everyday experiences such as eating and other food-related activities, which are largely routine.

Group processes are also responsible for weakness in the method, in that the group itself can influence the data it produces. There may be a tendency towards 'conformity', whereby participants withhold things that they might say in private, or towards 'polarisation' in which some may express more extreme views in the group than in private. Other disadvantages of group dynamics are that the expression of group norms might silence individual voices of dissent, this is where the moderator can play a critical role in encouraging other views to be heard. Group work can encourage shyer participants to take part, once less inhibited group members have broken the ice. The aim is for open conversation, whilst permitting the expression of criticism. Overall, the group dynamic should facilitate the expression of ideas and experiences that might be underdeveloped in individual interviews, and illuminate participants' perspectives through debate within the group (158).

3.1.1.3 Focus group discussion methods

The aim is a focused discussion, and this can be achieved with carefully predetermined questions, sequenced and phrased for ease of understanding by the participants. They should be primarily open-ended, with general questions at the start to encourage thinking and talking about the topic, and more specific, focused ones at the end to conclude with any final useful information. Researchers should make a written plan to ensure they are in agreement over the processes involved and the purpose of the

study. Plans, including time lines, also ensure adequate resources and time are in place to obtain the required information. The researcher's influence on the data is an issue in all qualitative research, so must be attended to. A systematic and transparent approach to the planning, data collection and analysis minimises any subjectivity (161).

Logistical factors are a critical consideration, as it is not always easy for participants to travel to a focus group, or it is difficult to assemble enough of the right people at the right time for a group session. It is important for maximising disclosure, that the participants feel safe and comfortable within the focus group environment. The research team must strive to find a suitable location that will meet these needs. The moderator has a critical role to play in ensuring that the ethos of the discussion is permissive and non-judgmental. If sessions are relaxed and held in a comfortable setting, it will help to establish the right atmosphere. Most will last up to two hours, and at the outset the facilitator needs to explain this and the fact that the aim of the focus group is to encourage people to talk to each other rather than to the researchers. It is usual to audiotape and transcribe the discussions verbatim (161).

As the raw data are people's own words, the data can be sensitive, making issues of informed consent, protection of confidentiality and inappropriate use of the raw data particularly important (162). Access to the tape recordings needs to be restricted to the research team. Another unique aspect of focus groups is the fact that participants' disclosures to the researchers are also shared with the other participants. Thus if there is a sense that the topic or the group of participants will not generate an open and free-flowing conversation, then focus group research is not appropriate (163). Eating habits and food choices were not felt to be of a particularly sensitive nature. For this reason quoting directly from the discussions in academic presentations and papers can be considered to be ethical. Names should not be linked to any transcripts or recordings.

3.1.1.4 Selection of participants

Qualitative methods are often used in the early stages of enquiry to examine complex phenomenon, so it is important that the raw data represents the phenomenon, partly in terms of selecting an appropriate sample. It is always useful to be able to generalise the findings, so at the outset the researcher must be clear about the population of interest. The researcher has an ethical responsibility to not mislead readers, so must make it clear to whom the findings can be generalised. Whatever analysis method is chosen, it will be sensitive to the quality of the raw data. The rigour with which the sampling is conducted determines the likelihood of developing a good quality code that

can be validated in future studies (162). Therefore, the adequacy and appropriateness of the sample is a major consideration in the planning of the project (162).

Participants need to be carefully selected on the basis that they are likely to provide insight on a particular topic, are within a particular age range, have similar socio-economic characteristics and would be comfortable talking to the researcher and each other (164). It is usual to aim for homogeneity in a focus group to capitalise on people's shared experiences, which may mean using naturally occurring groups. There is some debate about whether the participants should know each other or not. Some argue that people will be more honest, open and spontaneous if they do not know each other, but others advocate the use of pre-existing groups, as acquaintances can challenge each other on contradictions between what they say in the focus group, and how they actually behave (165). In the current study, it was felt there could only be added value where participants had knowledge of each other's history and lives, as they might provide contrasting views on shared experiences.

A particular strength of focus group discussions as a method of data collection is that they do not discriminate against people with low levels of literacy. Equally, participants of lower educational attainment may not feel comfortable with the formality and isolation of an individual interview, or may believe that they have nothing to say (158) and being part of a focus group discussion may be viewed as less threatening. However, it has also been found that a lack of confidence and low self-esteem often prevent individuals participating in group discussions (166). The recruitment process will need to consider all these issues, and the moderator will need to ensure that participants feel comfortable and empowered within the sessions.

3.1.1.5 Number and size of groups

Focus group studies can consist of anything from six to over fifty groups, depending on aims and resources (158). However, many authors suggest that it is unusual to have large numbers of sessions. Once the researchers feel they have reached "saturation" of a topic, ie that they feel they have heard a range of ideas and are not getting any new information, it is conventional to cease convening further sessions (161;167). This means analysis has to commence very early in the process of data collection, comparing transcripts to determine when saturation is reached. Resources available, both in terms of finance and time, will also play a part in determining how many groups can be conducted. If any decisions that involve considerable risk are to be based on findings from the groups, then it is sensible to increase the number of groups.

Consideration should also be given to how to configure the groups; how many of each type of participant should be recruited, and what formation of groups will give the most useful information.

Other important factors to determine at the outset are the optimum size range of the groups, and acceptable minimum and maximum sizes. The majority agree that somewhere between six and ten participants is the ideal (161;163). The nature of the research and the constraints of the field situation will inform and often dictate the size of the groups. Groups need to be large enough to gain a variety of perspectives and but not so big they become disorderly or fragmented (168). Whatever number is sought, it is important to over-recruit to cover for those who do not show up. The size can also depend on how much detail researchers need from each participant. Small groups work best when the participants are likely to be both interested in the topic and respectful of each other. They also give each group member more time to talk. Under these circumstances, researchers have found groups consisting of just three people to still be productive (163).

3.1.1.6 Moderating the sessions

Much of the success of focus groups depends on a skilful moderator. A critical skill is to create an environment in which the participants feel empowered to express their views openly and honestly. A moderator must believe that the participants have wisdom regardless of their level of education, experience or background. A moderator must listen attentively and sensitively, trying to understand the perspective of each person, and still actively listen even when the information is repeated in later sessions. It is important that the participants pick up signals from the moderator that their views are respected and valued. Thus, empathy and positive regard are important qualities in a moderator. Participants must feel comfortable with the moderator, so a friendly manner and sense of humour are an advantage, as well as the ability to listen and think simultaneously (161). The moderator must not direct the group, as this would make it less naturalistic. It is important that the moderator behaves as an inductive researcher, rather than from any preconceived hypotheses or theory. The moderator should be reflexive about their role, including consideration of their relative objectivity to the data in light of personal experiences and preconceived ideas.

The moderator should not act as interviewer, but rather as a facilitator of the discussion between participants using the question guide in a flexible way. In this way the discussion can be constructively channelled rather than forcing the group in one

particular direction. It is sensible to keep the introduction and ground rules as brief as possible, so as not to get the group off to a bad start by building their expectation that the moderator will be telling them what to do. The moderator needs to avoid asking questions in a confusing or convoluted way, as this jeopardises the whole process. The goal is to make group members feel responsible for generating and sustaining their own conversation (163). However, the moderator needs to understand the use of techniques, such as pauses and probes, which can both prompt additional points of view or agreement from group members. It is also important to ensure each person has a chance to speak, and this can require some delicate handling of difficult individuals who might be classed as dominant, shy, expert or rambling. These all present a challenge for which the moderator needs to be prepared (161). It can be advantageous to use a moderating team, with each member having specific tasks to perform: the moderator concerned primarily with directing the discussion and keeping the conversation flowing; the observer taking notes, handling environmental factors such as noise, heat and refreshments, and nearer the end of the session, prompting the moderator regarding any additional areas that need further exploration.

3.1.1.7 Analysis and conclusions

3.1.1.7.1 Aims of analysis

Focus group discussions generate large amounts of data, which can be cumbersome, complex, and overwhelming to the researchers (158). The aim of analysis is to reduce the data by means of examining, categorising and recombining the evidence in some way, in order to address the purpose of the study. Therefore the purpose drives the analysis, and it is vital to keep a clear eye on the purpose throughout the analysis process. This approach enables management of the data, makes sense of what is going on and gets rid of irrelevant information (161;169).

The aim of qualitative analysis is to bring meaning out of the data – to capture people's lived experiences rather than trying to quantify them. There is an element of subjective selection and interpretation of the data, though some subjectivity exists in all research. For instance in designing a survey, items are selected for inclusion, thus preventing the expression of other potential answers (170). However, to minimise any potential bias, qualitative analysis should be systematic, sequential, verifiable and continuous. This provides a trail of evidence, as well as increasing the dependability and consistency of the data. There must therefore be a clear procedure for data analysis, which would allow another researcher to verify the findings, and hence increase the rigour of the

study. Analysis of focus group discussions, in being true to the data, should include some illustrations of talk between participants, rather than just presenting isolated quotations out of context. An advantage of focus groups is that results can be presented in uncomplicated ways using lay terminology supported by these quotations (158).

3.1.1.7.2 Thematic analysis

Thematic analysis involves drawing together and comparing discussions of similar themes, giving some attention to minority opinions and examples that do not fit within an overall theory. A theme refers to a specific pattern found in the data, and can refer to something directly observable (eg mention of the word “healthy”) or to a more latent level (eg discussion in which health is implied). Thematic analysis usually draws on both types of theme, and the aim is to understand the meanings of ideas found within the data and interpret them (171).

One of the first steps is to decide what are the units of analysis and units of coding. The units of coding are linguistic segments of the transcripts, ie chunks of text, divided up according to the speaker, and numbered sequentially for each transcript of each discussion. It is vital to ensure that sufficient “codable moments” are captured, which is a strength of focused discussions, as opposed to video observations where they may be a need for many hours of recording to get sufficient codable moments. It is important to reflect repeatedly on what aspects of the phenomenon might be missed, or be unavailable for processing within the design chosen. Discussions with colleagues to determine if anything has been overlooked can be invaluable (162).

3.1.1.7.3 Code development

There are three different ways to develop a thematic code: theory-driven, prior research-driven, and data-driven (inductive) (162). These approaches can be considered to form a continuum, with each having benefits and challenges for the researcher. At the theory-driven end, researchers start with their own theory and develop a code consistent with that theory. A prior research-driven approach is similar, but starts with a literature review. Both these approach allows the researcher to replicate, extend or refute prior discoveries (171). Data driven codes are derived inductively from the raw data, and the researcher must interpret the meaning from the findings to construct a theory based on the results. This approach is useful in new areas of research, but a key dilemma for the researcher is whether to test theory or

explore new links. There would be little point in conducting empirical work and not being open to new information. However, the distinction between the approaches is not necessarily a firm one, and it is possible to use existing theories or previous published work to guide the questions one asks and one's understanding of the answers. It is advantageous to hold a model of testing that takes counter-evidence seriously (171).

A good thematic code must capture the qualitative richness of the phenomenon, and be usable for the analysis, interpretation and presentation of the research. It should also produce high interrater reliability. The label chosen for each theme must stick closely to the raw information, rather than just reflect what the researcher wants the theme to be. So where pre-determined themes have been used as a basis of the analysis, it is important that the researcher reflects on their usefulness in representing the data in the most truthful and insightful way.

One of the most important tasks in analysis is data reduction. This is achieved by comparing and contrasting the data, and cutting and pasting similar quotes together. Analysing the written transcripts rather than the audiotapes results in the inevitable loss of some data, such as the emphasis placed on certain words and phrases, the poignancy of gaps, etc. However, it is acknowledged that written material is easier to review repeatedly, which is essential for a comprehensive analysis. The extra elements of rich information provided by the audiotapes can easily overwhelm the coder. The researchers must read and listen to the raw material for each unit of analysis, ie for each focus group. This allows the information to enter the unconscious as well as being consciously processed. The time to be spent on reading the transcripts, developing the code, applying the code, comparing and contrasting according to the criterion, must be considered at the outset and allowed for within the timescale and budgeting requirements (162).

3.1.1.7.4 Final stages

The final stage of analysis involves applying the code, or emergent themes, to the different groups and determining valid differences. The researchers need to make sense of the individual quotes, and also see relationships between quotes and the data as a whole. It is important to account for not only what is said, but also how often a comment or view is made across participants and groups, and with what strength of feeling. It is at this time that themes are identified within samples and compared across samples. Now and again the researchers need to take a break from the

analysis process in order to refocus on the bigger picture. It might help to talk to others or change perspective, reflecting on the purpose of the study and why the research is important. This should ensure the interpretation is as honest and truthful as possible. Reducing the raw information into smaller "packets", makes the data more manageable whilst still retaining the essence of the raw material (162). Overall, this kind of analysis requires the development of new skills, as well as imagination, time, patience and practice.

Psychological theory suggests that there is a limit to the number of variables humans can keep in the conscious mind at one time (172), so it is important not to have too many themes to have to search for within any given code. If there are too many themes to identify, some will inevitably get missed. The alternative is to re-read the transcripts searching for different aspects of the code each time, which is more time consuming. It is suggested that for the final code, only the themes that substantially differentiate between groups of people are used (162).

It is important to determine the reliability or consistency of the coders, so it is suggested that another person applies the codes and themes to the same material independently. Interrater reliability can then be calculated. If the level of reliability is not desirable or consistency of agreement for any of the themes in the code is low, the theme must be reviewed and either be dropped or reconstructed. If reconstructed, the analysis process should take place again to test whether things have improved. Only the themes where high interrater reliability is achieved can be considered a reliable code (162).

3.2 Method

3.2.1 Participants

A total of 56 white British women between 19-45 years took part in the focus group discussions: 42 with lower educational attainment (mostly up to GCSE) and 14 with higher educational attainment (undergraduate degree or equivalent). As we want to compare and contrast how certain types of people talk about an issue, it is important to separate these people into different groups, in the case of this research, those with lower and higher educational attainment. The researchers can then analyse across these two different types of people. It was important to fully understand the motivations behind the food choices of women of lower educational attainment as they will be the

focus of any intervention. Therefore, more sessions were held with them, with some held with women of higher educational attainment for comparison purposes.

Table 1 Focus group participant details

		Living with children	Not living with children
Women of lower educational attainment	8 groups	42	0
(age range)		(19 - 44)	
Women of higher educational attainment	3 groups	5	9
(age range)		(33 - 45)	(25 - 34)

3.2.1.1 Participants with lower educational attainment

Women of lower educational attainment living in deprived circumstances can be a difficult-to-reach population due to lower literacy rates, high levels of domestic chaos and stress, and the constraints of time-demanding and complex lives (68). Speaking to those who work with them to make sure timing and locations of groups are as convenient as possible may improve recruitment. Therefore, a purposive sampling method was used whereby all focus groups with women of lower educational attainment were held in places that they would go to for routine purposes within the community: a new purpose-built Sure Start Children's Centre – a Government-sponsored scheme to improve health and well-being in families with children up to five years – and a church hall, run by Southampton Voluntary Services Family Projects. The second of these hosted a twice weekly support group for women with young children. The women at Sure Start Children's Centres were recruited by one of the researchers at baby clinic sessions. With the consent of the centre staff, each woman was approached and handed an Information sheet (Appendix B). Once this had been read, the women were asked if they were happy to be contacted to attend one of the focus group sessions in the coming weeks. If so, their name, telephone number, address and number of pre-school children (for crèche purposes) were recorded. The researcher then telephoned the women to arrange a convenient date, and confirmed this by letter and reminder telephone call the day before. Southampton Voluntary Services run drop-in lunchtime sessions, which are often attended by experts in fields relevant to the women's needs. It was therefore arranged with the organisers that the researchers on this study would take over some of these sessions, as the women

attended regularly and felt comfortable with visitors. In this way, we were able to recruit not only volunteers from the baby clinics, but also women who became our focus group participants because they were already there. This should minimise any bias arising from only having self-selecting participants. This recruitment strategy provided us with a range of women from our target population of women of lower educational attainment within the city of Southampton.

As all these women had small children, and the presence of children in the home is known to reduce the quality of women's diets, an attempt was made to identify a short-list of women with lower educational attainment without children from the SWS database. This list proved to be quite small and those appearing on it were an unusual sample, including those with learning difficulties or other medical conditions, which made them unrepresentative. The research team discussed this issue in some depth with colleagues and it was agreed that it was more productive to focus efforts on recruiting women who were more representative of the target population. Women who have left school with few qualifications are more likely to start their families earlier, and therefore will be making food choices for themselves in the context of a family, so this needs to be acknowledged in the sample. The purpose was not to recruit a random, representative sample of Southampton women of lower educational attainment, as would be required in quantitative research. In qualitative enquiry it is more important to evaluate the theoretical representativeness of the participants, so that the study can be assessed for any limitations in its scope, comprehensiveness, degree of saturation and bias (173).

3.2.1.2 Participants with higher educational attainment

A convenience sample of women of higher educational attainment (degree or above) from women interviewed for the Southampton Women's Survey (174) were recruited by letter plus an information sheet (Appendix C), and a follow-up telephone call. A reminder telephone call was made the day before the session. It emerged that all women agreeing to take part did not have any children. Using this strategy to recruit women of higher educational attainment <u>with</u> children proved as fruitless as trying to recruit women of lower educational attainment <u>without</u> children. A pragmatic decision was therefore taken to convene a final focus group using a convenience sample of women (known to one of the researchers) who did have higher educational attainment and young children. This was felt to be important in order to make some aspects of the data more comparable with that from women of lower educational attainment.

3.2.2 Materials

Following a review of the literature (see Chapter 2), a semi-structured discussion guide (Appendix D) was developed to explore the following potential influences on food choice: Psychological – including control, self-efficacy, mood (including self-esteem), and health beliefs, values and expectations; Social – influence of others; Historical – including childhood mealtimes, learnt attitudes, food habits, and experiences during important lifetime transitions such as leaving home, getting married and having children; Environmental – external factors that might constrain food choice, including access to shops, money and time; and Intervention - asking whether they wanted to change any aspect of their own or their family's diets, and if so, what would help them to do this. This discussion guide was first piloted on a convenience sample of women of differing educational attainment from within the researchers' workplace, to check coherence and timing.

3.2.3 Procedure

Prior approval for the study was gained from the Local Research Ethics Committee. Eleven focus group sessions were held, each lasting around two hours, and consisting of between three and eight participants. The sessions were run by two researchers, one leading the session (the moderator) and one attending to practical matters, such as completion of consent forms, organising refreshments and note-taking (the observer). All discussions were audio-taped and field notes made. Before the session began, all participants completed consent forms (Appendix E) and a short demographic questionnaire (Appendix F) to assess age, level of education (highest qualification achieved and age when left full-time education) and number of children in the household. The moderator briefly stated the aims of the study and the ground rules (confidentiality, freedom of expression, respect for each other, conversation staying within the group). To help the women relax and start talking to each other, most sessions started by showing the participants photographs of refrigerators belonging to some of the SWS women (175). The moderator then used the discussion guide to encourage the women to recall relevant experiences within the a priori categories.

3.2.4 Analysis strategy

3.2.4.1 Code development

The recorded sessions were transcribed verbatim, and the material was sorted into themes (162). The researchers read and reread the transcripts and discussed the best

approach to the data, bearing in mind the purpose of the study which was to identify similarities and differences in influences on the food choices of women of lower and higher educational attainment. We adopted a halfway position by using existing research and theory to guide our coding development, whilst remaining open to new ideas emerging from the data. After conducting four focus groups, two each with women of higher and lower educational attainment, we began reviewing and developing the coding frame. It is very important to identify the dependent variables, to be clear about what type of insight is being sought and why. From the planning stage it was determined that the dependent variables were influences on food choice, and the criterion for comparing these was the level of educational attainment achieved by the participants. It is then possible to conduct a 'compare and contrast' process to extract differences in the dependent variables between and among the samples of differing educational attainment.

A coding frame (Appendix G), corresponding to the original categories (Psychological, Social, Historical, Environmental), was developed to allow for summarising and indexing of the experiences described and opinions expressed in each transcript, by cutting the data into meaningful segments and pasting into new documents for each category. How widespread each view appeared to be in each session was noted. The researchers thematically analysed half the transcripts each, using a constant comparative method (162) to examine differences between women of lower and higher educational attainment, making suggestions for amendments or elaboration, including collapsing and expanding categories. The data under each theme were summarised and verbatim quotes used to illustrate the theme. Thus the coding frame evolved in an iterative manner, to account for emergent sub-themes within the a priori categories.

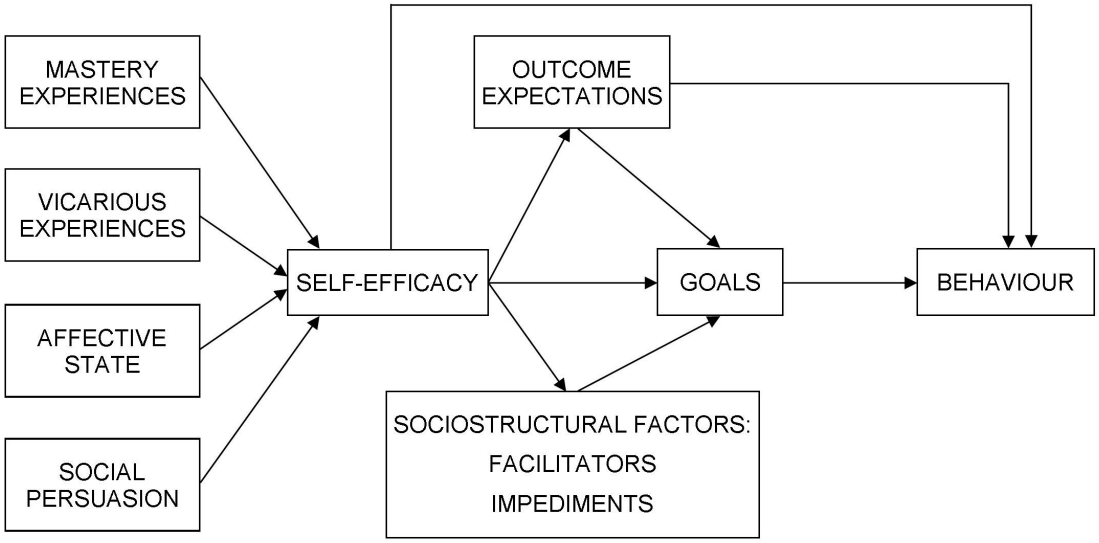
3.2.4.2 Theoretical model

As the analysis process proceeded and discussions were held between the researchers and interested experts in the field, it became clear that Bandura's social cognitive theory would be an appropriate model to give structure to the data (111). First introduced in Chapter 2, this model addresses both the sociostructural and personal determinants of action (111;114). Given the broad range of influences that are likely to affect food choice, aspects of this model can guide understanding of why women of lower educational attainment make poorer food choices, and how they might be supported to change. Whilst it was considered important to take an atheoretical stance when collecting the data, without this theoretical structuring of the results, it would have been difficult to convey a coherent message. It will therefore be used to

structure the interpretation and presentation of the data. How well the model fits the data and its usefulness in understanding food choices will be reviewed fully in Chapter 6.

Firstly, the key concepts that make up this model will be reiterated to ensure the route through the data presented in the Results section (3.3) is meaningful to the reader. Figure 4 depicts key aspects of the model, outlining how a range of factors might impact on behaviour.

Figure 4 Bandura's social cognitive model of behaviour



Self-efficacy has a pivotal role in the causal structure of this model, and research supports the idea that an individual's sense of personal control is linked to their self-efficacy (114). Indeed Bandura defined self-efficacy as *"people's beliefs about their capabilities to exercise control over their own level of functioning and over events that affect their lives"* (176) p257). He argued that these efficacy beliefs influence the choices people make, their aspirations, how much effort they expend over any given endeavour, how long they persevere in the face of difficulties and setbacks, the amount of stress they experience in coping with challenging environmental demands, and their emotional vulnerability. Simply, an individual only feels in control of a situation if they believe they have the ability to carry out an action (117). Perceived control comes from having the required skills coupled with a strong sense of efficacy to use them effectively and consistently in difficult circumstances. Thus, to feel in control individuals

must believe they are capable of changing or undertaking the behaviour that achieves control (117).

The model suggests there are four main influences on self-efficacy (111;114). *Mastery experiences* refer to the impact of previous successes or failures on how much individuals will persevere when the going gets tough. *Vicarious experiences* are provided by seeing people similar to oneself succeed, which can raise the observer's belief in their own capabilities. *Affect* refers to an individual's state of mind, whether they are feeling positive or negative. *Social persuasion* is how others can help build an individual's efficacy by not only providing positive appraisals, but by structuring situations that enhance the chances of success and self-improvement. Also incorporated are perceived sociostructural *impediments* (such as cost or access) and *facilitators* (such as social support) to action. Then there are *outcome expectancies,* whereby an individual must believe that any action they take will make a difference to the desired outcome. Whilst we briefly explored participants' beliefs about what would help them change, we have not focused on this aspect yet, so the analysis has not explored the final element of the model, being goals.

3.2.5 Verifiability

Sub-sections of four transcripts were double-coded by both researchers to quantify interrater reliability. The overall percentage agreement was 96%, with mean percentage rates for the five overarching themes ranging from 93% to 100%, which is considered to be an acceptable level of reliability (177).

To assess whether the interpretation of the data was representative of the views expressed, the researchers revisited two of the groups to present their overview of the findings. These sessions were also recorded, transcribed verbatim, and thematically analysed to ensure no new themes emerged, and that there was consensus among the participants regarding the interpretation presented.

3.3 Results

Emergent themes that appeared to differentiate between women of lower and higher educational attainment are presented below, using Bandura's social cognitive theory as a framework (111). Whilst self-efficacy is a central construct in this theory, the most prominent theme to emerge from the discussions related to women's perceived control

over food choices for their families. Self-efficacy and control are thus considered first in this section, then three of the four factors Bandura suggests impact self-efficacy – mastery experiences, vicarious experiences and affect (there was no evidence of social persuasion) – followed by impediments and facilitators to action, and outcome expectancies.

3.3.1 Self-efficacy

As will be reviewed later in this section, there were differences between women of higher and lower educational attainment on the influences on self-efficacy (mastery and vicarious experiences, and affect) in relation to food preparation and cooking. However, self-efficacy itself did not appear to differ noticeably between these groups of women. It was not the case that women of lower educational attainment were less confident about making food choices than women of higher educational attainment, because they did not know how to cook, or were not interested in food generally. Some women across both educational attainment groups enjoyed and were confident in their ability to prepare and cook meals; others were not. This woman of lower educational attainment expressed her lack of confidence in her cooking skills:

> *'Yeah I suppose I would like to make nice meals, if I had the confidence and knew what to do…'*

and so did this woman of higher educational attainment:

> *'… and I haven't got the foggiest idea what it is, and I would feel completely threatened by it 'cos I really, I don't know, I'm not a great … I don't like different things and feel sort of inadequate with lots of sort of different vegetables in particular, 'cos I don't really like them'.*

This was in comparison to women in both educational attainment groups who were more confident about their skills and knowledge, and thus prepared to experiment. This woman of lower educational attainment enjoyed experimenting with food, regardless of the outcome:

'And they're like "whoo what did you do to this" and I was like "I put a bit of this in and a bit of that" and I do and it turns out alright and other times it's "ooh we'll put that in the bin then"! But you've just got to, and it's like then that's the way you explore and you find new meals and think "oh that was alright actually".'

However, whilst women of lower educational attainment demonstrated knowledge of recommended guidelines, some were not confident that they could meet these:

LEA woman 1: '… we'll usually have at least a piece of fruit a day, but we never eat five.'

LEA woman 2: 'No, that would be masses.'

Overall explicit levels of self-efficacy with respect to food preparation did not clearly discriminate between women of higher or lower educational attainment.

3.3.2 Control

However, women's sense of control over the food provided to the household discriminated strongly between those of lower and higher educational attainment. There were clear differences in the amount of control family members had over the food choices for the household. Compared to women of higher educational attainment, women of lower educational attainment spoke more frequently about how their partner controlled the food choices. In this example, it was expressed quite explicitly:

LEA woman: 'I get told what to cook '

Moderator: 'So how does that work?'

LEA woman: 'My husband tells me what to cook and I cook it.'

Other partners made demands about how the food should be provided:

'Yeah, that's what I have to do with my husband, 'cos he hates chips or rice or pasta, anything like that, reheated. He'd rather eat it cold that have it reheated.'

By comparison, women of higher educational attainment described their partners as compliant with their attempts to eat well, and showed how they maintained control by making most of the food decisions, even if this meant their partners did not always get their preferred option:

'… I make sure they (snacks) are healthy. He can't have like a pork pie and a milk shake or something, no he has water and some sort of rice cake.'

Women of lower educational attainment appeared to have a less powerful role in their home and often felt food provisioning was out of their personal control, with other members of the household dictating the food they would or would not eat. The women were concerned that the choices made by other family members had a direct consequence on the quality of their own and their families' diet:

'They're more like their Dad and, like their Dad, he wouldn't touch vegetables.'

In the households of women with lower educational attainment, even very young children exercised a huge amount of control over what was eaten, like this participant's 3½ year old son:

'He wouldn't touch anything that has been, I mean you give him a bruised apple and he's like "no thanks. I won't eat it, no thanks it's got a bruise on it". Or I'll give him a broken biscuit and he'll say "no thanks, it's broken, I don't want that one" … (laughter). It isn't funny you know. I've been to the shop and bought him cakes, and as we've got them out of the bag they've snapped in half and he's been like "I want another one. Buy me another one. I will not eat it." So I have to buy about three or four cakes.'

Sometimes it was easier to meet their children's demands, even unreasonable and costly ones, rather than face a daily battle. Amongst those women of lower educational

attainment who were more in control of their family's eating habits and food choices, there was a sense that this control was not always a good thing:

> *LEA woman 1: 'I cooks for the kids. If they don't eat it, they don't eat it. I know they normally eat it so. It's like if I done them pasta or something then I know they love pasta. If they don't eat it, I'm not gonna go and do them nothing else. It's their fault. If they're hungry at 10 o'clock at night then that's their problem'.*
>
> *[Laughter]*
>
> *LEA woman 2: 'You're nasty'.*
>
> *LEA woman 1: 'I'm evil, I am. I'm an evil mum'.*

The humour in this exchange reveals the women's underlying beliefs that there is conflict between providing their children with a healthier option, and giving their children exactly what they want to keep them happy. This in turn appeared to affect their perception of their relationship with their children. They wished to avoid confrontation and conflict with them, which meant that these women were less motivated to ensure their family ate a healthy diet.

However, not all women of lower educational attainment deal with challenges from their children in the same way. The following exchange compares the approach of two women of lower educational attainment. They appear to have a differing sense of control over their child's eating habits:

> *LEA woman 1: 'I mean [4]Claire won't eat veg but I'll put it on her plate …I say to her like you might change, you might like it, we'll try it today. You know, because I know your taste buds change.'*
>
> *LEA woman 2: 'I wouldn't even put veg on Oscar's plate. If I did he would waste a whole meal. He would starve himself.'*

[4] All names changed to protect participants' anonymity.

Women of higher educational attainment with young children also spoke of the difficulties they encountered trying to get their children to eat a varied and balanced diet. However, they appeared to be highly motivated to provide healthy meals for themselves and their families. This goal was achieved by adopting problem-solving strategies. They had thought through the process of introducing novel foods and had clear expectations of their children, and how they as a parent would respond to their behaviour:

> *'I don't cook incredibly strange things and so I think that they should just eat, get on and eat it, but yes, I mean Alfie, if he eats sweet potato he retches then. That's fine but he doesn't have to have it again. But it's funny how I thought I would be pandering to all sorts of things and ending up cooking, you know, different meals for everybody and I haven't'.*

This woman of higher educational attainment had clearly rationalised an approach to minimise her stress levels whilst ensuring cooperation from her children:

> *'… if I know it's a tricky dish I won't push it on them at a time when they're likely to be tired and when we're likely to be less patient. I'll save it for something like the weekend or something'.*

Thus, even if children are being fussy or difficult with their food choices, women of higher educational attainment maintained a sense of personal control over the situation. Women of lower educational attainment were much more likely to concede the control to others within the house, which meant they often gave up on attempts to provide healthier food. This in turn had an impact on their own diet:

> *'I won't ever cook a chicken because it would only be me eating it because Liam doesn't eat it and you couldn't really get him to try it, and Ellie would probably try it but … if you sat her down with a plate of so much she wouldn't eat it all.'*

3.3.3 Mastery experiences

Self-efficacy is said to be derived from several sources of influence, including mastery experiences (111). In this study, how the women learned their cooking skills and their experiences of cooking in the past appeared to be influencing their present levels of efficacy regarding tackling novel foods. Women of lower educational attainment frequently reported that they were not taught to cook at home:

> *'I wasn't allowed to go in the kitchen. It was my Mum's kitchen and I wasn't allowed … I think with my Mum, it was just easier. She had to cook for me, I've got three younger brothers and my dad and she had to cook for all you know, six people and it was just obviously easier and quicker if she just did it herself.'*

This contrasted vividly with the experiences of women of higher educational attainment:

> *"'Cos mum used to make us cook and through my dad's job they occasionally used to have a dinner party or something and it was all very low key and it was always just a few of my dad's colleagues, but mum would get me to cook with her and get me to help and my brothers would lay the table and we'd sort of, yeah we'd have to chop all the vegetables"*

For many women of lower educational attainment, the first opportunity they had to learn to cook was when they left home and suddenly had to cook for themselves and their children. The women were quite clear that they had not been taught how to cook at home or school. This lack of mastery was likely to be impacting on the foods they felt confident to buy and prepare for their families.

3.3.4 Vicarious experiences

Another source of influence on self-efficacy is vicarious experience, including experiences in childhood and at major transitions points, as well as that provided by current family role models. Women of both lower and higher educational attainment had vivid memories of food and meal times from their childhood. The difference between them was that women of lower educational attainment tended to construct those memories less positively. They appeared to have fewer opportunities to observe home-cooking and healthy eating by significant others against which to judge their own

capabilities. They recalled being exposed to a limited range of cooking styles and foods when they were growing up:

> *'Well I knew, well 'cos my Mum had the same things each day so you knew the week before what you was having next week anyway. Yeah, Mondays we used to have chips, Tuesdays be mash, Wednesday be chips, Thursdays be … then Sundays would be a roast. It was mash, chips and roast.'*

Perhaps unsurprisingly, the childhoods of women of lower educational attainment contained more examples of deprivation and neglect than those of women of higher educational attainment:

> *'We weren't allowed a lot when we were little …it would literally be a teaspoon with jam on two pieces of toast each. My mum would get up in the morning and put a teaspoon of jam on the side and we would have to share it on our toast. And our cheese would be wafer thin, you've never seen such thin cheese.'*

In comparison, this woman of higher educational attainment recalled very different experiences from her childhood:

> *'My Mum's into all these cooks … and in the sixties she was a young mum in London. It was all like Elizabeth David and all of this stuff and then I remember my Dad going through a phase where he thought we should like look at vegetarian and vegan type stuff and I was like twelve or thirteen and we still ate meat and stuff but we also had like seaweed. My Mum eats all sorts of food … I've had served up to me as a child, I've had brains, I've had heart … liver and kidney quite regularly.'*

Seeing firsthand within her family how a variety of foods can be made available provides useful vicarious experiences on which to build a high level of self-efficacy. The next woman of higher educational attainment was clear about how she preferred to prepare food, and her current level of self-efficacy came from the experiences she had when growing up:

'… and I really would prefer to make things from first principles, because I was brought up that way, um, so it's much nicer to make your own stuff'

The impact of major transition points in the women's lives on their food choice trajectories was clearly described in our focus groups discussions, and provided more evidence of the kind of vicarious experiences the women had been exposed to in the past. This women of lower educational attainment talked of how she shared similar eating habits with her friend:

'I lived with a friend of mine and we both did different shifts, and so we kind of lived off toast and that was like it really. We both worked in the evenings as well as during the day, so we'd just come home, have some toast and beans on toast or something and then go straight out back to work again. That was kind of how we lived, so we never had anything in the fridge. We may have had about half a pint of milk and half a tub of butter and that was about it really.'

Some women of lower educational attainment reported that moving in with a partner after living as a single adult had a positive effect on their food choices. This woman described how her eating habits became more structured:

'Yeah when I met my partner it changed a hell of a lot 'cos we used to stand in the kitchen for two hours preparing things, because we did it together … because we both used to work the same hours, so we'd come home at six and we'd both stand (and cook) and have dinner at eight.'

However, some women of lower educational attainment had partners with unhealthy eating habits:

'My husband's an athlete and he does this very physical job, so he eats a lot, a lot, lot lot. Like today he got up this morning and had like a big chocolate bar for breakfast, followed by toast, followed by cornflakes, followed by four packets of crisps and then he eats Twix bars, biscuits … and then he has a banana …'

This meant that not only did her husband have control over what foods were brought into the house, but he was modelling this eating behaviour to the rest of the family. His eating habits also ensured that these unhealthy snack foods were accessible within the home and therefore available to the household.

3.3.5 Affect

Self-efficacy is also said to be moderated by an individual's emotional state, as this can affect their judgment of their capabilities. Women of lower educational attainment showed evidence of low mood, appearing to be less interested in their own health and well-being generally, in comparison with their concerns for the rest of the family.

When there was no-one else around at a mealtime, some did not to value themselves highly enough to cook. They were much more likely to eat poor quality snacks and go without meals:

> *'I think it all comes back to how you feel about yourself in the end, because if you feel important, then you'll cook yourself a meal, whereas your children are important to you, friends, family, whatever are important to you. That's why you cook … I don't feel that way about myself, so I don't bother.'*

Feeling that she is not important enough to bother about, clearly reflects a sense of low self-worth. There was also evidence of women not eating well (if at all) even when they had provided a meal for their partner and children, as evidenced by this exchange:

> *LEA woman 1: 'You put yourself back as well … everybody else comes first, so you don't worry about yourself until everybody else has been sorted, like I say, not until everyone's gone to bed and you've done, and then you can kind of think about yourself.*

> *LEA woman 2: 'Yeah, "I've not had nothing to eat", and then instead of cooking something nice, you just go pick at stuff.'*

Women across the educational attainment groups talked about weight control, but women of lower educational attainment showed evidence that this was related to a negative body image:

'Well, we eat unhealthily because we can't be bothered to eat healthily and then because we eat unhealthily, we're fat …'

Their negative body image was reinforced by this type of comment from an unsupportive partner:

'"He says, "I ain't fat, you are. I don't need to diet".'

So introducing a new, healthier eating regimen into this household was regarded as a "diet" which was not perceived to apply to the man of the house.

This was in contrast to women of higher educational attainment; if they planned to eat alone, they were more likely to cook batches of things they could heat up quickly, or make a healthy snack, than not bother at all:

'you know we went through a phase when he was away, so then I was at home on my own and I went through phases then when I was cooking stuff and I would say like cook a casserole and make three portions and freeze a couple of, and stuff like that'.

This effort to ensure that they ate home-cooked meals, even when eating alone, suggests that the women felt they were worth "bothering" about, perhaps reflecting a more positive affect.

3.3.6 Impediments to healthy eating: cost and waste

Impediments and facilitators to healthy eating exist in an individual's sociostructural context, and Bandura describes these as mediators of the relationship between self-efficacy and the desired behaviour (111). One impediment that arose in many of the discussions with women of lower educational attainment, perhaps not surprisingly, was the perceived cost of food in relation to other financial priorities:

'It is a real big money factor because every week I've got to pay a big bill. If I spend all that I've got left on shopping then … I'm going to be without everything else. I've got petrol to put in my car, electric to put on …'

For some, shopping healthily meant upgrading the quality of the processed food products they bought:

> *'Yeah, you can get ten normal, well ten rubbish, economy fish fingers for 26p and things like that. And then when you go to the cod ones you are paying £2 or £3, and it is very dear.'*

For others, it was the relative cost of fruit and vegetables at the supermarket:

> *'Fruit & veg is expensive. It's a shame they can't make that cheaper, rather than make all the crap food special offers. There's always buy-one-get-one-free in't there on a packet of chicken nuggets or something.'*

This observation about supermarket special offers was made by many of the women of lower educational attainment, and it seemed to inhibit them from buying fruit and vegetables, which again diminished their perceptions of control over the food choices they could make for their families.

Not all the women in the lower educational attainment groups agreed that healthy food was more expensive, but those who argued that you could eat healthily and cheaply appeared to have more knowledge and cooking skill:

> *LEA woman 1: ' I mean it could be quite cheap to feed a family of five on stew or mince or that kind of stuff …'*
>
> *LEA woman 2: 'And shepherds pie …'*
>
> *LEA woman 1: 'Yeah, that kind of stuff.'*

The other concern for women of lower educational attainment, was to balance the cost of the food with how much of it was likely to be wasted. This was a prominent feature of all our discussions with these groups of women; they could not afford to have food tried, not liked and thrown away, so they tended to buy what they knew they, their children and partners liked and would eat:

LEA woman 1: 'I think that's why you stick to the stuff that you like because you know you like it and you know if you're going to buy it, you're not going to waste it.'

LEA woman 2: 'It's the same with the children as well, you know they'll eat it.'

LEA woman 1: 'Yeah, yeah, I stick to what they like, you know, 'cos I know that it's not gonna get wasted.'

The discussions suggested that a consequence of waste being unaffordable was that women of lower educational attainment had little opportunity to introduce variety into their diets or try new foods. The other consequence of trying to avoid waste was that some women of lower educational attainment bought little fresh food. Fresh fruit and vegetables were seen to be particularly wasteful because they were very likely not to be eaten and 'went off' very quickly:

'But when it's only me and the two children … they don't really like vegetables. I'm lucky if I can get in the odd carrot, or couple of peas or sweetcorn, so it's all gonna go off. So I just buy a bag of (frozen vegetables).'

The contrast with the views of women of higher educational attainment could not be greater. There simply was no conversation about having to balance cost with waste. The cost issue for women of higher educational attainment was whether they felt able to afford to buy top quality or organic fruit and vegetables. Frozen, tinned and processed foods were rarely mentioned, and fresh produce appeared naturally to form a part of their daily diet.

3.3.7 Impediments to healthy eating: accessibility

There were other sociostructural factors that affected the degree to which women felt they could control their diets. Women of lower educational attainment described being at home all day with small children and being bored. The combination of boredom and having constant opportunities to eat because they were at home, made it very difficult for them to control their eating habits. They were tempted to snack all day.

'I eat a lot on a Monday night 'cos my husband goes out. You know, I'm at home on my own and it's just so boring.'

They compared this to how things were when they were working and perceived themselves to have had more control over their access to food:

'Because I'm at home, you are always by the fridge. There's more opportunities to snack. Then when you're at work you're not even thinking about it 'cos you're doing other stuff …whereas when you're at home you're like "Oh, …what are we going to have for lunch? What are we going to have for dinner?" …When you're out working you're thinking, you know, "What am I doing tonight? Where am I going tonight?" …You're thinking about different kinds of things, so you're not thinking about food as much as I think about food now. Food is something I think about a lot.'

Women in our higher educational attainment groups were more likely to be working than those in our lower educational attainment groups. Working women recognised they were removed from the temptations of food at home, and tended to manage their opportunities to eat at work so as to minimise temptation.

Regarding access to and shopping for a variety of foods, all the women managed to get to the big supermarkets one way or another and none of them seemed to have a problem with these arrangements; they accepted them as the way things were. The difficulty the women of lower educational attainment did have was shopping for food with small children. Navigating around the shops with buggies was physically difficult, and coping with bored and demanding children was stressful:

'I don't drive, I have to rely on another person to take me shopping and … it's always a hectic time. I think when you've got … I've got two kids and it's "I want this, I want that" and I'm like "MY GOD, we're trying to shop alright"!'

Living close to a big supermarket did not necessarily make things easier:

'I live just down the road from it (the supermarket) so I walk there but I am on the third floor without a lift, so I do have to hump it all up there. So yeah, that's why I go twice (a week), so I can carry it – you can only buy what you could fit underneath the buggy. And you've got to get up your three flights of stairs when you get back with the buggy, child and bags of food. All in one go. You can't leave any of them at the bottom. Well I do, I sort of take the shopping and Katie up, plonk her in her cot and then go back and get the buggy.'

Many of those who walked to the shops used the buggy to transport their shopping, and more than one of them complained that they had broken them in the process. Their lives were made more difficult by the fact that they could not get a fully-loaded buggy onto the bus.

Despite these difficulties, all the women of lower educational attainment shopped regularly, and though they used convenience stores and local shops to stock up on fresh food more often than women of higher educational attainment, there was no evidence that their shopping was haphazard or unplanned. Many of them described shopping to a plan of what they were going to cook everyday for the following week. Planning and buying exactly the right amount of each ingredient for each meal was one way they described of keeping down the cost of their shopping:

'Yeah, if I buy enough food it lasts me a whole week. So I buy bread and bits of chicken that you can put with mixes. Like, I'll buy a big bag of cheap pasta 'cos I know that's gonna last me for ages. Stuff that, you know, that's gonna last for like a week or longer …'

In this way, they felt they were maintaining some control over the food they bought for the family. However, they were also aware that the more often they went shopping, the more opportunities there were to lose self-control and be tempted into buying 'naughty' foods and 'goodies':

'I don't like to go shopping too often, 'cos when I do I start picking up all the naughty stuff – all the chocolate and the crisps and the stuff that's on offer.'

When asked what could be done to overcome some of these impediments and help them improve their diets, women of lower educational attainment suggested delivery of

fresh, bulky items like fresh fruit and vegetables. Shopping on-line with the big supermarkets was not an option for most, because this requires access to the internet and a credit card, which many did not have. They had in mind a 'door-to-door' service like the traditional British milkman offers. The women who made this suggestion did point out that deliveries would have to be reasonably priced, good quality and arrive at a convenient time to be an attractive option.

3.3.8 Impediments to healthy eating: time

Perceived time scarcity meant many women felt they did not always have time to cook as they might have wished. This was particularly true of the women of lower educational attainment. The pressure to feed hungry children quickly led them to rely on convenience foods:

> *'I'd just chuck something in the fryer, sausage and chips or something. I'd just quickly do it so it's done.'*

They all thought that cooking 'properly' took time. Some said they would prefer to cook from fresh ingredients if they had more time. Those who were cooking from fresh ingredients every night recognised that this would sometimes mean their children had to wait a long time for their meal. As one women of lower educational attainment pointed out:

> *'No matter how many people say 'it's just as quick to do this' or 'it's just as quick to do that', it is quicker to do convenience food. That's why it's called convenience food, isn't it?'*

However, women who complained about boredom and time hanging heavily, realised the contradiction inherent in then saying they did not have time to cook:

> *'I don't know why, sitting here now … I don't work and (I say) that I haven't got the time to cook. I don't know why I haven't.'*

Women may be constructing time differently, suggesting that a perception of time as scarce is an interpretation of the time available and the demands on them: the women's perceptions are their realities, and need to be understood and addressed if they are to be helped to make improvements to their diets.

3.3.9 Facilitators to healthy eating: social support

In the discussions with women of lower educational attainment there was little evidence of social support within their households for their attempts to provide a healthy, balanced diet. There was a strong sense of struggle for women of lower educational attainment trying to do the right thing by their partners and children:

> *'I tend to have all freezer foods. I have a problem with my partner and my son. They don't eat a lot of fruit and veg. Like, I cook meals and I just get fed up of doing it 'cos they won't eat it, so I don't bother half the time.'*

With this lack of reinforcement for the efforts she has made in the past, this woman had given up the struggle to get her family to eat fruit and vegetables. She wished to provide food that was good for them, but at the same time wanted them to eat something, so this lack of support had undermined her motivation to improve the family's diet. It also meant that the variety of foods the woman felt she could provide was limited:

> *'… my partner will only eat two sorts of vegetables, which is green beans or carrots … he prefers chips and beans'*

This contrasts vividly with some of the experiences of the women with higher educational attainment, whose partners were more likely to share the women's food preferences and be supportive in instrumental as well as socioemotive ways:

> *'like this weekend I said "oh I think we could do something, bacon or lettuce for lunch" and I'd got some hard boiled eggs I'd forgotten to use and he did a really nice salad with … couscous, broad beans and coriander and then he did crispy, crispy bacon, eggs and cos lettuce or something, and it was very nice, very delicious and I thought what more could you ask for?'*

and

> *'Mine's quite good, he's quite happy to eat veggie with me'.*

There was no mention of this type of support from the partners of women of lower educational attainment.

3.3.10 Outcome expectancies

Women in both educational groups were involved and interested in food and cooking, reading labels and talking in nutritional terminology. Some had fairly accurate perceptions of what might be considered "good" and "bad" foods, and mentioned their relevance to health conditions and a healthy life. However, whilst women of lower educational attainment talked about eating healthily and many were broadly aware of nutritional guidelines, they were less explicit about the link between good nutrition for themselves and their family, and future health outcomes. This woman of lower educational attainment only considered current eating patterns in relation to being on a weight-loss diet:

> *' … once a week we'd clean out the back of his car … used to sit and share a pack of something with Lisa, and a bag of crisps and some Jaffa cakes and … we'd find all these packets and Paul would say, "it's disgusting, the amount of crap you eat is disgusting", and we didn't think about it 'cos we weren't dieting.'*

If losing weight is not a conscious goal, then these women may give a low priority to eating healthily. These two women of lower educational attainment give the impression that, whilst they appreciate being in good health, achieving it was not high on their priority list:

> *LEA woman 1: 'And I think there's a certain limit to it and I think yeah, it's good to be healthy but I don't push it.'*
>
> *LEA woman 2: 'You can be too healthy.'*
>
> *LEA woman 3: 'Yeah, I think you can be.'*

This contrasts with women of higher educational attainment who talked much more about eating a healthy, balanced diet:

'… I think about the balanced diet all the time. That's the thing that sort of controls how I shop and so treats, sort of non-healthy foods are definitely sort of an addition to that. So that's the kind of emphasis'.

They also provided a broad range of foods to their family and were clear about the nutritional value of this, as evidenced by this woman who's young daughter had adopted a vegetarian diet:

'… I have adjusted what we eat slightly by adding ingredients like beans and lentils that she'll get her protein from and making sure she has, you know, large numbers of mushrooms in her diet and nuts and seeds …'.

Women of higher educational attainment showed more awareness of some specific health messages and food scares, which was impacting on their food choices, such as:

'… packets of lettuce washed in chlorine or something, so even if it says washed … 10 years ago I might have often bought pre-done lettuce or something as a short cut, whereas now I wouldn't.'

Many women's eating habits changed when they had children. It appeared to make them think more about long-term outcomes, such as health, which suggests that having children influenced their outcome expectancies in a positive way. For women of higher educational attainment and some of the women of lower educational attainment, being pregnant prompted them to make improvements to their diets. For some this was eating breakfast where they may have not done so before. For others it meant abandoning crash diets:

' I will eat. I won't not eat 'cos I know I've got to be more aware now.'

And for others, being pregnant meant they had to think more about what they were eating:

'I've already got two kids to care for … and the pregnancy's tiring me out already I think that if I eat properly and stuff like that then I'll be alright.'

However, there was a group of women of lower educational attainment who responded more negatively to becoming pregnant, maybe because of the difficult circumstances they found themselves in:

> *'When I was pregnant with my second child, I was going weeks on end without anything to eat. I actually lived on toast, yeah a slice of toast every few, well every four or five days or something like that.'*

For some women of lower educational attainment, becoming mothers improved their eating habits. They had to plan meals and cook 'proper' food for their children, which meant they were more likely to eat 'proper' food too:

> *'I think my eating habits are actually better now that I've got him because I think "I really can't be bothered to cook" or "I could just do Matthew this or that". (Then) I think "No! He needs to have proper solid meals like my mum cooked for me". He needs proper, solid vegetables.'*

The women's principal motivation for making positive changes to their diets on becoming mothers seemed to be the health of their children. For many women, the benefits it might have for themselves seemed to be incidental. However, one woman of lower educational attainment spoke about the way having to feed her children had transformed her own taste for vegetables:

> *'I think it was when I had my first child. 'Cos exactly what my mum said to me is true, "just because you don't like it, it don't mean they don't like it". Yeah she said "just because you don't like it, you've still got to buy it 'cos they might like it. Just try it, you never know" she said. So you know, and then I used to sit down and think "well is it really that bad? Let me have a go", and then I just grew to love it and I absolutely love my greens now. I love all veg.'*

This woman of lower educational attainment reflected on her health aspirations for her children, and how women do not share these aspirations for themselves :

'So I think it just depends on if your motherly instinct towards your child is to grow up and be healthy even if you're not, so you wouldn't necessarily think about what you're eating, you'd think about your child first, as long as your child is growing up healthy it wouldn't matter and that's just a motherly instinct to do that'.

Some women of lower educational attainment were not consciously aware of health as their priority for their children, but as this comment made by one woman to her friend shows, it was sometimes an unconscious motive for them to change their own diets:

'Your main reason for dieting is, and you said it to me before we started Weight Watchers, is you don't want your children to suffer because of your weight, so you ARE thinking about your future and their future, whether you realise it or not, because if you weren't you wouldn't have said something like that.'

This exchange demonstrates the value of the dynamic nature of the group discussions. Group members could elicit insights into the behaviour of each other in a way that the moderator might be unable to do.

Women of higher educational attainment with children were more likely to talk about the whole family, including themselves, in discussions about eating a balanced, nutritional meal. This woman reflected on her childhood and how she adopted the philosophy from that time with her family today:

'We had quite sort of set meals but they were all very sort of balanced nutritionally, and I suppose I wanted that for our family.'

Although some of the women of lower educational attainment seemed less concerned about their own diet than that of the rest of their family, others did believe in the importance of eating a healthy meal themselves, and were able to relate it to immediate health benefits:

'If you eat rubbishy stuff, you'll slouch around more, but if you got up and ate your porridge and then your nice healthy sandwich for lunch, I guarantee you doing your bedroom cleaning after.'

Additionally, some did reflect on the long term implications of eating healthily for themselves and their family:

> *'But at dinner especially, I think I've got to eat it because I am a Mum and I have to keep up my energy 'cos I've got, I am a mother and a wife and I have to feed them and look after them, and I can't look after them if I don't look after myself.'*

In the following example, having an example of ill-health within her family, had provided the impetus for this woman to prioritise healthy eating in her life:

> *'You have to think about food is important, it is very important. I think also seeing how unwell my grandparents are as well helps. 'Cos my Granddad hasn't, he's not on an unhealthy diet but they come and like … home cooked dinners and … occasionally high in fat and things like that and he's really poorly 'cos of it and they've got diabetes and stuff.'*

This demonstrates that personal or family illness may be an effective prompt for positive behaviour change. However, it is not a strategic approach for a public health intervention.

3.3.11 Focus group dynamics

Focus groups were chosen as the method of data collection for the first phase of this research project, as the literature suggests they can provide deeper insights into people's lives than can be achieved using individual or group interviews. There are elements of the group dynamics that can potentially provide added value to the discussion. This part of the Results section reflects on how the focus group discussion method contributed to the study findings, and is illustrated with examples of different types of group interaction.

Some of the women in the groups knew each other well, some had met before, and some did not know anyone. This made for some interesting dynamics and challenges for the moderator. It was important to ensure all individuals felt empowered to contribute, even when they could see others were friends within the group. It was thus part of the moderator's role to ensure groups of friends did not dominate the

conversation, whilst allowing them to exchange views and debate issues for which they had common experiences.

3.3.11.1 Anecdotes

One pair of siblings demonstrated how having a shared history enabled them to discuss and debate food-related experiences, revealing more information than would have been accessible otherwise. Here they are talking about how their mother limited the foods they ate, in contrast to their father:

> *LEA sister 1: "It wasn't like she didn't have the money to do it, she just was tight, and we weren't allowed to have it, so in the end you rebel …*
>
> *LEA sister 2: "… very strict meals, and if we didn't like what was cooked then we would have to go to the next meal before we had anything else."*
>
> *LEA sister 1: " We weren't allowed anything like Coke or squash or anything like that, so … when we went to my Dad's we could do pretty much what we wanted, so I used to have Pot Noodle for breakfast …"*

Other participants knew each others' habits, and that meant more information was obtained than would otherwise have been possible from just probing by the moderator. This quote was taken from a longer exchange about one woman's desire to be in control in her household, and how her friend had observed and was amused by this behaviour:

> *LEA woman 1: "Can I just say, she has to wash up as soon as you've eaten … it's got to be done:.*
>
> *LEA woman 2: "I do that".*

Observation of each others' children gave insights into women's beliefs about controlling their children's eating behaviour:

> *LEA woman 1: "He wouldn't eat the chicken, he wouldn't eat the potatoes".*

LEA woman 2: "He would eat it at Sally's house if you weren't there, because children will, like at my house if I said "Craig, you're not leaving from the table until you eat that, he wouldn't move until he ate it, because he would be frightened not to".

Exchanges like this revealed that the women understood they had a role in controlling their children's eating habits, and the challenges they faced in doing so.

3.3.11.2 Challenging

The relationship between some of the group members meant they were comfortable confronting each other about their beliefs and behaviour. As a consequence, the research team learnt more about the range of attitudes to diet and healthy eating than they otherwise would have done:

LEA woman 1: "I could do yeah, but … it's like people saying 'oh you should eat healthily, you should make this' and I think 'no, I don't want to', I don't want to stand in the kitchen and prepare …"

LEA woman 2: "Yeah, but what's fruit Karen, it's pence isn't it? You could even eat fruit during the day and … your body would appreciate it".

And:

LEA woman 1: "I mean I get ill quite a lot".

LEA woman 2: "Don't you think you get ill 'cos you don't eat though half the time?"

LEA woman 1: "Yeah, maybe I do".

[Laughter]

To a certain extent, participants are free to be judgemental and confrontational which elicited deeper understanding of these women's lives. This type of approach is not appropriate for the moderator, so is a valuable element of focus group dynamics.

3.3.11.3 Consensus

Where group members shared similar views on certain issues, the discussion was often sustained for some while as they tested these views on each other. It also gives an idea of how widely held certain views are. The exchange below explains why individuals had swapped from frying food to grilling it:

Moderator: "What made you change from fried to grilling?"

LEA woman 1: "I hate the smell".

LEA woman 2: "It gets all soggy, it soaks up too much, and it was just horrible …"

LEA woman 1: "You're not tasting the food."

LEA woman 2: "… you can't taste it …"

This type of interactive conversation is good for clarifying beliefs, without the moderator having to interrupt the flow of the discussion.

3.3.11.4 Humour

The group discussions were often lively and good-humoured. Laughter was commonplace, and helped create the relaxed, open atmosphere conducive to productive data collection. In this example, one woman is teasing another about how her family eats. It would not be possible for the moderator to make these kind of judgmental comments, but other group members can do so:

LEA woman 1: "I'd probably get a takeaway".

LEA woman 2: "The kids get skanky old scabby chips, and she gets a takeaway!"

The next woman is laughing at her own lack of knowledge about some foods. These kind of self-deprecating comments, may encourage others to admit shortcomings which they might have felt embarrassed about doing before:

LEA woman 1: "I said 'I've never had cucumber with a roast before', and everyone laughed at me and said 'it's courgettes'."

LEA woman 2: "I love courgettes. It's one of my favourite vegetables."

LEA woman 1: "Roasted courgettes." I thought it was a cucumber!"

[Laughter]

Here the women joking about their weight contributed again to the open, honest nature of the discussion, empowering others to also be open and honest.

LEA woman 1: "Maybe if we had a bit of weight behind us."

LEA woman 2: "We got plenty of weight behind us!"

[Laughter]

LEA woman 3: "Not that sort of weight!"

LEA woman 1: "Oh alright, like a bit of clout. We'll get the local MP …"

3.3.11.5 Advice

Another way the women interacted was by offering each other advice based on their own experiences. In this way it is possible to find out more about their past experiences, without having to ask direct leading questions:

LEA woman 1: "Perhaps what you should do then is say … 'if you try this once and you don't like it, you don't have to have it'."

LEA woman 2: "He's still a bit young though isn't he at two?"

LEA woman 1: "Yeah, but you can say to Sophie 'try that, and if you don't like it, don't eat it' and she'll try it."

LEA woman 3: "And when they're younger, if you do that every month, by that time they might have forgotten about it and then try it again the next month."

Again in the next exchange, two women who had both been to a diet club swapped experiences of successful dieting. This provides an interesting snapshot of how dieting impacted on one woman's life and the reaction of the other to the extremes of dieting:

LEA woman 1: "In my first week of dieting I had to go to bed early 'cos I was so hungry."

LEA woman 2: "Ooh, you shouldn't be hungry on Weight Watchers."

LEA woman 1: "No, but I lost 9½ lbs in my first week, so it was worth it."

LEA woman 2: "Maybe you were starving yourself?"

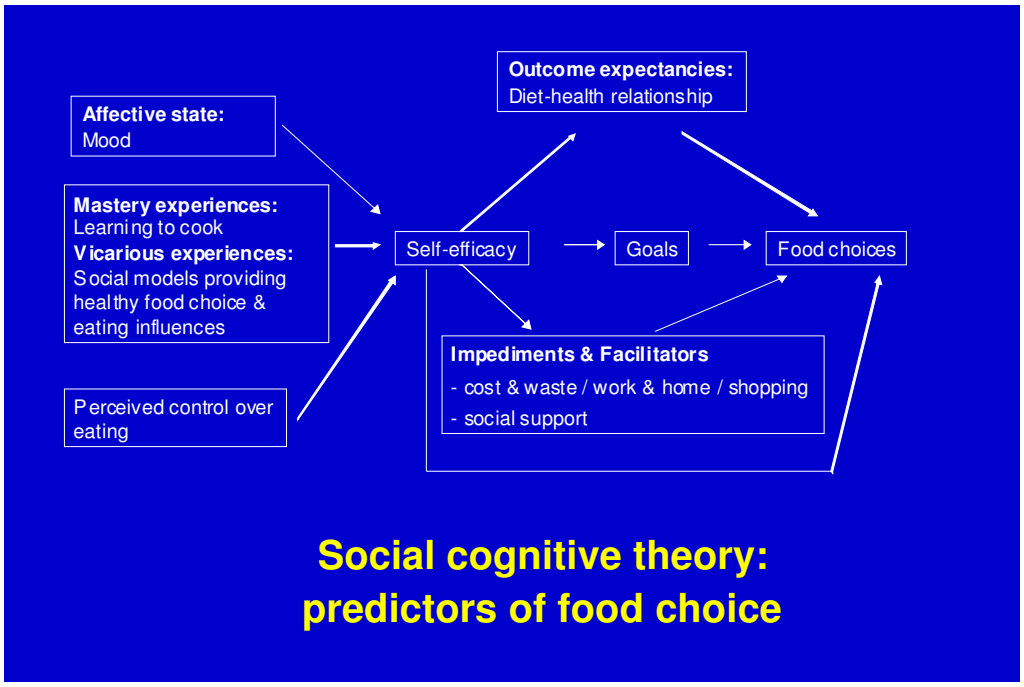
The dynamics of the focus group were a powerful contributor to the data collected and the insights gained. This method elicited information that may not have been accessed in individual interviews.

3.4 Discussion

The aim of this first phase of research was to use focus group discussions to learn more about influences on the food choices of young women and how these might explain why women of lower educational attainment eat poorer quality diets than women of higher educational attainment. Bandura's social cognitive theory (111) provided a useful framework for exploring the relationship between educational attainment and food choice, and allowed us to understand the influences on this relationship. Figure 5 shows how the findings from the focus group discussions might

fit into the model. This can be used to identify which influences appear to be important and how they might interact to affect food choice.

Figure 5 Bandura's social cognitive model: predictors of the food choices of young women



The focus group discussions revealed clear differences between women of lower and higher educational attainment in the influences on their food choices. The over-riding difference to emerge from the data was in the degree to which women of lower educational attainment and higher educational attainment perceived they had control over the eating habits of themselves and their families. This appeared to have a major impact on how healthily women and their families ate. All other factors identified in the analysis can be conceived as impacting on this sense of control. Research suggests that perceptions of control have an important influence on self-efficacy and behaviour (117). Perceived control comes from having the required skills to carry out a behaviour, coupled with a strong sense of efficacy to use these skills effectively and consistently in difficult circumstances. In the focus group discussions, differences in the perceived control of women with lower and higher education were more evident than differences in self-efficacy. We found that compared to women of lower educational attainment, women of higher educational attainment felt more in control and able to find the necessary energy and resources to provide their whole family with a varied and balanced range of foods.

Women of lower educational attainment had more negative memories of food-related experiences in childhood than women of higher educational attainment. This equated to fewer appropriate mastery experiences, such as being taught to cook, and less positive vicarious experiences from family and friends throughout their lives. As well as being described as influences on self-efficacy in Bandura's model (111), mastery and vicarious experiences are likely to increase the sense of control these women have over feeding themselves and their families. Women of lower educational attainment had experienced a narrower range of foods, with fewer fruit and vegetables in childhood than women of higher educational attainment. If important social influences in the women's lives, both past and present, do not provide positive examples with which the women can compare themselves, they will lack opportunities to acquire knowledge for developing skills and strategies for overcoming perceived barriers to eating a varied and health diet. This would partly explain why women of lower educational attainment felt they had less control over their food choices than women of higher educational attainment.

Another influence on self-efficacy in Bandura's model (111) and therefore control in our adaptation of the model, is affect or mood. Some women of lower educational attainment appeared to have a low sense of self-worth and a negative body image, which may partly be accounted for by lack of encouragement and negative comments from some partners. The women put everyone else in the household first, and placed little value on their own health. They were more likely to eat quick, unhealthy snacks than share family meals, and would even go without meals altogether. They talked of not bothering about themselves, whilst ensuring the rest of their family were cared for. Feeling like this, may not instil the women with the energy, motivation or sense of empowerment that is needed to take control and bring about difficult changes. This was in contrast to women of higher educational attainment who spoke about looking after themselves in a way that showed higher self-esteem and a feeling that they were worth the trouble. The substantial literature on dieting to lose weight would lead us to expect this to be a big influencing factor on women's food choices. Whilst there was some conversation about losing weight and the organisations that provide support for this, this was observed in the discussions of women with both lower and higher educational attainment. There is little doubt that when women are dieting it will influence their food choices, but there was no evidence from the focus groups that this differed according to level of educational attainment.

In social cognitive theory, facilitators (such as social support) and impediments (such as the cost of food) are said to influence the adoption of a desired behaviour (111). By

dictating what they would or would not eat, partners and children of women of lower educational attainment played a large part in determining what foods were brought into the households. This is likely to make the women feel less in control of the way their family eats. Women spoke of other family members not wishing to eat the meals they provided and being resistant to any changes the women might wish to make. This lack of support sometimes had the effect of making the women give up this particular battle. The perceived cost of, and access to, healthy foods and perceived time scarcity were more prominent impediments to eating healthily for women of lower educational attainment than higher educational attainment. It is likely that if women view these impediments as factors external to themselves, and therefore outside their control, they will be prevented from making healthy food choices. It may be a reality that these factors will impact on a woman's ability to provide her family with healthy meals. However, having more of a sense of control over life might make these barriers less difficult to overcome, which might be one reason why women of higher educational attainment manage to eat better quality diets.

The final factor in our adaptation of Bandura's model as applied to influences on food choices was outcome expectancies. Compared to women of higher educational attainment, women of lower educational attainment appeared to be more ambivalent about the link between good nutrition and future health. This was reflected in their comments about not overdoing the health aspects of diet and in the sense that there was not much they could do to prevent becoming ill. If they lack control over their lives, they may also feel the future is out of their control. Without a belief that a current behaviour (quality of diet) will bring about a positive or negative outcome (health status), women are unlikely to attempt to improve their diets.

3.4.1 Strengths and limitations

There are limitations to this type of study. A relatively small sample was recruited, so other themes might have emerged as important if we had seen a greater number of women who had had different life course experiences. However, there are currently in existence few other qualitative studies underpinning our understanding of the food choices of young women with lower educational attainment. This exploratory approach was therefore considered to be a sensible first step towards understanding the influences and motivations of this population in respect of their food choices. Whilst the sample was relatively small, it was felt that sufficient focus groups had been conducted to reach saturation of the topic. The aim of qualitative enquiry is to develop a concept or theory as completely as possible, to represent a phenomena (173). If

concepts are developed well, they should be recognisable in other places, other groups and in other situations. Thus even if the sample is small, it does not restrict the applicability of the study to a wider population. Most focus group studies use a theoretical sampling model whereby participants are selected to reflect a range of the total study population. Given the method of recruitment, there is no reason to believe that these groups of women were unusual within the population from which they were drawn and therefore are likely to represent the views of that population.

A smaller number of focus groups were held with women of higher educational attainment, and only one where those women had children. Clear differences emerged between the women of lower and higher educational attainment, rendering the need for further comparison unnecessary. Furthermore, analysis of the data generated from the one group of women of higher educational attainment with children demonstrated that the participants described similar problem-solving strategies to those of women with higher educational attainment without children. They appeared to have transferred these skills to parenting and family life. It was therefore considered unnecessary to recruit any more women of higher educational attainment for the purpose of comparison.

The nature of focus group data determines that analysis is conducted at the group, rather than individual level, and increases the chance that the views expressed may be misrepresented or weighted inaccurately. Through careful planning of the data collection and analysis processes, including double-coding, a high level of quality control was achieved. This should minimise any misinterpretation of the data, or misrepresentation of the volume of discussion captured under each theme. Furthermore, feeding back these conclusions to some of the participants confirmed our belief that our analysis had merit.

The focus group discussions relied on participants' reported memories, which may differ from actual experiences, either consciously or subconsciously. One could argue that behaviour change is a personal action based on an individual's perception of their life rather than on an objective reality. Therefore, whilst self-report data may not always reflect actual behaviour, it is the participants' own explanations and perceptions that are of primary interest in understanding their food choices and barriers to change (97).

Although a good rapport appeared to have been established by the moderator in all the groups, there is always the possibility that some individuals might have felt inhibited by either the researchers or their fellow participants, and therefore withheld information or went with the consensus instead of expressing their own opinions. Following good focus group practice, the research team reflected on each session once the participants had left. Whilst we cannot guarantee that all participants expressed their full and frank opinions, there was little to suggest that this was a common problem. There is also some argument that when individuals know each other within focus groups, it might inhibit honest, open and spontaneous responses. We do not believe this to be the case in this study. The benefit of some women's shared experiences and knowledge was that it provided a deeper understanding of their lives.

3.4.2 Reflection on using this qualitative method

In all research methodologies it is important to be reflexive about the research process, but this is especially important when using a qualitative approach. Time is therefore taken here to reflect on this phase of the project, acknowledging any difficulties and how these were overcome.

With qualitative research it is important that the data collection and analysis run concurrently from quite early on in the process (161). This means that changes to data collection methods can be made if areas need further exploration or aspects of the discussion guide are felt to be unhelpful. An early data collection strategy involved talking the women through their day from meal to meal, noting their food choices on a flip chart. After two sessions, it became clear that this meant more time was taken up creating lists of foods eaten, and less time understanding why these foods were chosen. It was thus decided to change the protocol and instead show them pictures of the insides of refrigerators at the beginning of the discussion to break the ice and encourage participants to talk about their own refrigerators and move on to why they contained what they did. This meant more time was spent talking about reasons for food choices, rather than the food choices themselves, which provided more useful data for the analysis.

Different locations were used for the focus group discussions. We met with the women of lower educational attainment in two locations. Half the groups consisted of women who used Sure Start facilities, and these sessions were held within a relatively new, purpose-built Children's Centre. The other half were convened with women identified by Sure Start as needing extra support, but who had not yet fully engaged with the

services provided by the Children's Centres. These women meet regularly at a local, slightly run-down church hall over lunch organised by volunteers. We joined them on some of these occasions. Both locations provided free crèche places for the women's children. The first two groups of women of higher educational attainment met at the Medical Research Council Epidemiology Resource Centre, and the final group met in one of the researchers' homes. It was not felt that any of the settings had a substantial impact on the conversations or data collected. The strategy to go to the women of lower educational attainment rather than invite them into our facility meant they were in a familiar setting where they felt comfortable. This was evident from the free-flowing conversations that ensued. Women of higher educational attainment were all working and had a degree; they thus seemed at ease within the academic setting at our offices.

As we were attending some pre-existing groups, we had sessions where participants knew others in the group. In one case we had two sisters. This was advantageous in that women with shared histories could explore past experiences, comparing their own recollections and encouraging reminiscences. It did sometimes require the moderator to ensure others in the group felt empowered to offer their own opinions, and were not excluded from the discussions. It was felt that these situations were managed well enough to allow all women to contribute. The overall aim for all the sessions was that the women should feel comfortable and empowered to contribute: the settings and research approach used enabled this to be achieved.

This was my first time moderating focus groups, so it was a learning experience. I had attended a one-day course, and read several seminal texts on best practice and the processes involved (158;161;178). However, it must be acknowledged that whilst the aim was to moderate as professionally and objectively as possible, my prior experiences and attitude as a moderator may have influenced the groups differentially across the time taken to complete the data collection. As I transcribed and/or listened to all of the taped sessions, and reviewed the field notes, it was possible to consider this possibility, but no changes in my style were apparent or noted as affecting the discussions. I am therefore confident in the consistency of the quality of the raw data.

Coding and analysis were undertaken by the moderator and observer of all the focus groups. This meant they both had insight into the discussions before starting the analysis process. Sufficient time had been allowed for this process, so many discussions, recodings and coding frame changes took place over several months. This process only ceased when good agreement was reached on the coding of the

data overall. Recommendations and guidelines from a range of sources were followed and adhered to (162;179).

It was not felt that any of these factors had a significant effect on the data collection and conclusions drawn. However, with this methodology there is always the possibility that a different researcher would identify different themes and produce a different interpretation influenced by their own perspective and experience. It is hoped that the detail of the methods presented within this chapter, the stringent approach taken and the illustrations provided by the quotes to support the themes identified by the research team, will convince the reader of the merit of this particular interpretation of the data.

3.4.3 Conclusions

Using Bandura's social cognitive theory (111) to interpret findings from the focus group discussions provided an initial understanding of how educational attainment might affect food choices, and how the differences in psychological and social factors between women of lower and higher educational attainment might result in different food choices. In comparison to women of higher educational attainment, women of lower educational attainment lacked control over the food choices they made for themselves and their families. This lack of control may be explained by these women having less mastery and vicarious experiences in relation to food-related activities throughout their lives such as lacking cooking and food management skills; having more negative affect; receiving less social support for eating healthily; and being subjected to a range of environmental impediments. Furthermore, women of lower educational attainment did not appear to prioritise their own health, and seemed to feel fatalistic about their ability to improve their diets in order to improve future health outcomes.

As well as observing differences between women of lower and higher educational attainment, there also appeared to be some notable differences within the group of women with lower educational attainment. Some appeared to be managing the food choices for their families better than others. Previous research has found that mothers with young children differed significantly in influences on their food choices, and these differences transcended demographic variables such as age and socioeconomic status (180). As women of lower educational attainment are more likely to eat poorer quality diets and suffer more ill health, it is important to understand what enables some of this population to be better able to provide themselves and their families with healthier meals than others.

Whilst it is not necessary to test qualitatively derived theoretical understanding, it is desirable to show the distribution of concepts in the target population, and move towards measuring these (173). Specifically, we now need to understand how influences on the food choices of women of lower educational attainment identified in the focus group discussions impact on the quality of their diets. The next phase of this research therefore is to use Bandura's social cognitive theory (111) to guide the development of a questionnaire to be administered to women of a range of educational attainment. The aim is to measure the direct effects of a range of social and psychological factors on the quality of their diet.


& well-being study

Chapter 4

The impact of social and psychological factors on women's quality of diet

4.1 Background

The first two chapters of this thesis described the political and health imperative for improving disadvantaged women's diets, and reviewed the literature to identify theories and influences on food choices. Chapter 3 described the focus group discussions, which showed that a woman's perceived control was important in determining the foods she chooses for herself and her family. This sense of control was seen to be influenced by past experiences with food, the social support received from her family for providing healthy foods, the impact of cost, access and time, her affect and beliefs about the benefits of eating healthily. Differences in these may explain differences in the quality of diet between women of lower and higher educational attainment.

Aim 2: The second aim of this research project was to measure the impact of key social and psychological influences on the diets of women of lower and higher educational attainment.

This chapter describes the next phase of this research, "The Nutrition and Well-being Study", being a questionnaire survey of young women in Southampton. It is possible to hypothesise from the focus group findings that certain social and psychological factors influence the food choices of women in Southampton and may explain why quality of diet varies with women's educational attainment. To test these hypotheses, a cross-sectional survey can investigate the associations between these factors and women's diets in a larger sample from our target population. As demonstrated in the previous chapter, many of the factors identified in the focus group analysis were suggestive of constructs employed by Bandura's social cognitive theory which addresses the sociocultural and personal determinants of health (111;114). The survey reported in this chapter is based on this theory and measures the determinants of the specified health behaviour in order to try and explain the relationship between educational attainment and quality of diet in women in Southampton. We were particularly interested in factors that appear to impact on diet and are potentially amenable to change, ie to focus on those psychological and social factors that it may be possible to manipulate. The value of using Bandura's social cognitive theory (181-184) as a model for the social and psychological processes involved in the women's food choice

decisions was that it specifies the relationship between factors and therefore permits some understanding of the causal mechanisms involved. Applying findings from others' research, and from the previous chapter to social cognitive theory produces the following hypotheses:

Women of lower educational attainment eat a poorer quality diet because they have:

- less perceived control over their lives
- lower perceived self-efficacy
- less social support for healthy eating
- poorer psychological well-being
- more food insecurity
- fewer positive outcome expectancies
- more negative outcome expectancies
- lower levels of food involvement

These hypotheses were tested in a sample of 378 women of a range of educational attainment all living in Southampton.

4.2 Method

4.2.1 Design

A cross-sectional survey was carried out, using a structured questionnaire (Appendix H), developed from the focus group work and guided by social cognitive theory (111;114), administered to women attending sessions at Sure Start Children's Centres in Southampton.

4.2.2 Participants

The target population was young women of child-bearing age. In order to ensure that a substantial proportion of the sample were women of lower educational attainment, it was decided to recruit women from areas of social disadvantage within the city, as socio-economic factors like education and income tend to be highly correlated. After a consultation meeting with the Sure Start Strategic Development Manager for Southampton, a pragmatic decision was taken to recruit women attending baby clinics and play sessions at Sure Start Children's Centres in the city. Women attending these

sessions live within areas of disadvantage and are supported by agencies such as Sure Start.

The aim was to recruit approximately 400 women (at least half with lower educational attainment). The focus groups had shown there were clear differences between women who had no qualifications above GCSE and those with a degree. It was therefore considered appropriate to apply the same cut-off to define "lower" educational attainment. A power calculation showed that 253 women would be sufficient to detect an increase in prudent diet score of 0.2 SD per 1SD difference in perceived control as measured by the General Control Scale (185), with 90% power at the 5% significance level.

4.2.3 Materials

A structured questionnaire was developed to measure predictors of a healthy diet as identified in the focus group discussions and guided by Bandura's social cognitive theory (111;114). Diet was assessed using a 20-item food frequency questionnaire (FFQ), developed from the SWS 100-item FFQ (186).

Educational attainment was defined in six groups according to the women's highest level of academic qualification. Examinations for General Certificate of Secondary Education (GCSEs) are generally taken at 16 years, Advanced Level (A Levels) at 18 years, and High National Diplomas (HNDs) and degrees thereafter. Women were also asked to report their age at time of interview, the number of children they had living at home with them, and their dress size as a non-intrusive marker of Body Mass Index (BMI). This self-report measure of body size has been shown to correlate strongly with objectively-measured indices of adiposity (187). It was important to get some measure of the women's size, as BMI is known to confound the assessment of diet. The questionnaires were all administered at busy Sure Start sessions which made it unfeasible to measure the women's height and weight. Validated scales to measure factors identified previously as potential influences on food choice were included (Table 2).

Table 2 Scales within the questionnaire

Scale	Authors	Exemplar item	Scoring
FFQ – short	Crozier et al (186)	Over the past month, how often have you eaten … roast potatoes & chips	Never – More than once a day (7 response categories)
Social support for healthy eating	Ball et al (188)	How often in the past month did members of your family eat healthy foods with you?	Never – More than once a day (7 response categories)
Household Food Security Scale	Blumberg et al (64)	We couldn't afford to eat balanced meals.	Sum of number of "Yes" responses to 6 items
The WHO-5 Well-being index	WHO (189)	I woke up feeling fresh & rested	All of the time – At no time (5 items measured on 6-item likert scale)
General control scale	Bobak et al (185)	I can usually stick to my aims & reach my goals.	Not true – Always true (9 items measured on 4-item likert scale)
General self-efficacy scale	Schwarzer & Jerusalem (190)	There are certain things I can do to reduce the risk of heart disease.	Strongly agree – Strongly disagree (10 items measured on 4-item likert scale)
Outcome expectancies	Renner & Schwarzer (191)	I know if I eat healthy foods … I'll feel happier.	Strongly agree – Strongly disagree (12 items measured on a 4-item likert scale)
Food Involvement Scale	Bell & Marshall (192)	Cooking & barbequing is not much fun.	Strongly agree – Strongly disagree (12 items measured on a 5-item likert scale)

Each of these scales is described in more detail below.

4.2.3.1 Food frequency questionnaire (FFQ)

A reduced 20-item version of the Southampton Women's Survey FFQ was developed to assess diet (186). These 20 foods were the foods that characterised the pattern and contributed most to the prudent diet score in analysis of the SWS data collected using a 100-item FFQ. The 20 most influential foods have a correlation with the 100-item score of 0.94, so seem to be a pragmatic choice (186). Women were asked to indicate how often in the average month they ate each of the 20 selected foods, possible

responses being never, once a month, once every two weeks, one to two times a week, three to six times a week, once a day and more than once a day. A prompt card to define the food categories was shown to the respondents to aid their responses (Appendix I). The reduced version takes less time to administer, which was crucial in this study given the time constraints of the interview setting.

4.2.3.2 Social support for healthy eating

Social support for healthy eating from family and friends was assessed with three items adapted from a validated scale (188). These assess how often in the past month individuals have shared healthy foods with others, and how often others have encouraged/discouraged them to eat healthily/unhealthily. To maintain consistency with the FFQ section, the same response set was used – numbered 1 to 7. The words "healthy low-fat foods" from the original scale were changed to "healthy foods" as the focus of this study was not specifically on low-fat foods, but more about whether people are eating a balanced and varied diet. It was clear from the focus group data that some of the women with lower educational attainment thought about healthy eating solely in relation to weight-reduction, and it was considered important not to bias the women's responses by mentioning "low-fat".

4.2.3.3 Food insecurity

The Short Form of the Household Food Security Scale was used to measure food insecurity (64). This has been shown to be robust for classifying the food security of households in the general population. It asks whether and how often in the past year respondents have missed meals or eaten smaller meals, whether they have eaten less than they felt they should, and whether they have ever gone hungry because there was not enough money for food. It captures self-perceived nutritional inadequacy, household food depletion, disrupted eating patterns, and the repetitive pattern of reduced food intake. Totalling item responses shows whether participants are food secure, have some food insecurity, or in the worst case, are experiencing hunger.

4.2.3.4 Well-being

The WHO-5 Well Being Index (WHO-5) is a well-documented and easy to use scale for assessing psychological well-being, and as a screening tool for depression in primary health care (189). It is quick to complete and score, with items summed to show the

worst to best possible psychological functioning. It is well-validated and used widely in primary health care.

4.2.3.5 Perceived control

We used the 9-item General Control Scale (185) to measure women's perceived control over life. Three of the nine statements referred to perceptions of control over health; the remaining six statements reflect a general sense of control over life. This is a short form of the measure used in the Whitehall II study. It has been found to correlate with self-rated health and depressive symptoms (185). Other measures of control are available, such as the Health Locus of Control Scale (138) which specifically relates to the respondent's beliefs about their own health. As it was felt that eating has many perceived meanings, not just in relation to health, a more general measure was preferred. The General Control Scale was amended to reduce the Likert response categories from six to four, given the likely constraints of the interview setting and possible literacy issues of the participants.

4.2.3.6 General self-efficacy

A sense of self-efficacy, along with control, emerged from the focus group discussions as a potential influence on the food choices of young women. The General Self-efficacy (GSE) scale assesses whether one can perform novel or difficult tasks, or cope with adversity in various domains of human functioning (190). This 10-item scale is quick to administer, and the original German version has been revised, adapted and translated into 26 other languages. It has been shown to be reliable and valid, and suitable for a broad range of applications. It was designed for a general adult population to predict the ability to cope with daily hassles, and as making food choices could be viewed in this way, it is thus relevant to this study. Each item in the scale refers to successful coping and an individual's stable belief that success is due to their own efforts. It is suggested that perceived self-efficacy is a predictor of subsequent behaviour and is therefore relevant in behaviour change research and interventions. The scale does not measure specific food-related behaviour, but a search to find a food choice efficacy measure was fruitless. Self-efficacy scales in relation to healthy eating tend to focus on low-fat/low-salt dietary choices in clinical populations, rather than balanced and varied diets in a general population.

4.2.3.7 Outcome expectancies

The Outcome Expectancies of Behavior Change scale was used to measure outcome expectancies, specifically to assess perceptions of the consequences of eating healthily (191). This scale has 12 items, six each for positive and negative expectations, thus creating two separate sub-scales. Again reference to low-fat and low-salt foods was removed to maintain the focus on a generally balanced and varied diet. The original scale had been translated from German, so the wording of some items was changed slightly to be more comprehensible to a UK population with lower literacy levels. It was not felt that these alterations affected the meaning and therefore the scoring in any way.

4.2.3.8 Food involvement

The Food Involvement Scale was developed to measure the acquisition, preparation, cooking, eating and disposal of food (192). Factor analysis has shown that the 12 items create two factors: "set and disposal", and "preparation and eating". Earlier research findings (182) showed that women's food involvement was strongly related to both educational attainment and quality of diet (as assessed by fruit and vegetable intake), it was therefore considered an important variable to measure. It is not part of Bandura's model, but could be seen as relating to mastery or vicarious experiences, in that it reflects interest and engagement with food which could result from positive experiences of preparing, cooking and eating a range of foods.

4.2.4 Procedure

Ethics approval was gained from the University of Southampton School of Medicine ethics committee. The researchers approached the head of child and family services at Southampton City Council to enlist her support and help in accessing the clinics and family centres served by Sure Start in the city. She advised her team leaders and co-ordinators across the city about the study, and provided us with a contact list and dates/venues of the clinics and play sessions. We liaised with her staff to arrange convenient times to attend these. Women were thus approached during the play sessions and baby clinics and handed an information sheet explaining the presence of the research team and the purpose of the study (Appendix J). After allowing them time to read the information, women were asked if they would like to complete a questionnaire with the researcher. We recorded no information on the women who refused to take part. Those that did agree, signed a consent form (Appendix K) and

had the procedure for the interview explained (front page of questionnaire). The researcher then administered the questionnaire, using prompt cards to help the women choose responses to each item, including the FFQ prompt card (Appendix I). This took approximately 15-20 minutes. If English was not the women's first language, one of the play workers would act as interpreter, meaning the interview took longer.

4.2.4.1 Statistical analysis

A prudent diet score was calculated for each woman using her standardised frequency of consumption of each of the 20 foods in the food frequency questionnaire (FFQ), multiplied by the coefficient for that food produced by principle components analysis of the SWS FFQ (32). Principal components analysis generated a prudent diet score for each woman, that correlated strongly ($r = 0.94$, $p < 0.0001$) with the prudent diet score calculated from the 49-item SWS FFQ (186). The prudent diet scores were then standardised to have a mean of zero and a standard deviation of one. High prudent diet scores from the original SWS FFQ reflected frequent consumption of fruit and vegetables, wholemeal bread, rice, pasta, yoghurt and breakfast cereals – in line with Government and other agencies' healthy eating guidelines (193); and low scores reflected more frequent consumption of chips and roast potatoes, sugar, white bread, red and processed meats, full-fat dairy products, crisps, sweets, tinned vegetables, cakes and biscuits.

Responses on the social support, food insecurity, well-being, general control, general self-efficacy, outcome expectancies (positive and negative separately) and food involvement scales were then summed to create a total score on each scale for each woman. Where necessary scoring was reversed. Higher scores indicate higher levels of a construct, eg more social support, higher self-efficacy.

Histograms were produced for all the continuous variables to assess normality of distribution. Pearson's correlation coefficients were calculated for correlations between prudent diet score and all the independent variables excepting food insecurity. Social support scores were logged in order that scores were normally distributed. This is a common statistical technique used when scores have a distinctive right-hand skew. Spearman's correlations were calculated for all relationships with food insecurity as scores were not normally distributed and were too skewed to be successfully log transformed. Multivariate linear regression models were produced separately for women of lower and higher educational attainment. Focus group discussions had suggested that social and psychological variables might affect the food choices of

women of lower and higher educational attainment differently. In the focus groups, women with lower educational attainment had up to and including GCSEs; in the higher educational attainment groups all women had a degree. These definitions were therefore used again to classify women with lower and higher educational attainment. These analyses were carried out to examine the direct effect of social and psychological variables on women's quality of diet by educational attainment. Analysis of the data was undertaken using SPSS and STATA.

4.3 Results

Exploratory data analysis was carried out to provide a profile of the sample – separately for women of lower and higher educational attainment. The mean age, numbers of children living at home, clothing size and levels of all psychological scales and scores are given in Table 3.

Table 3 Characteristics of 378 women by educational attainment

	Lower educational attainment – up to & inc GCSE (n = 212)	Higher educational attainment – above GCSE (n = 166)	Test for trend (p)
Age in years (median (IQR))	27 (22 - 30)	30 (26 – 33)	< 0.001
Number of children living at home	n (%)	n (%)	< 0.001
0	5 (2)	4 (2)	
1	91 (43)	98 (60)	
2	66 (31)	42 (25)	
3	35 (17)	17 (10)	
4+	15 (7)	5 (3)	
Clothing size (UK sizing)	n (%)	n (%)	0.63
6 to 8	7 (3)	7 (4)	
8 to 10	34 (17)	31 (19)	
10 to 12	55 (27)	41 (25)	
12 to 14	41 (20)	32 (19)	
14 to 16	29 (14)	26 (16)	
16 to 18	17 (8)	16 (10)	
18 to 20	16 (8)	8 (5)	
20 and above	7 (4)	5 (3)	
Social support for healthy eating – median (IQR)	13 (10 – 17)	15 (13 – 20)	< 0.001
Food insecurity – median (IQR)	0 (0 – 2)	0 (0)	< 0.001
Well-being – mean (SD)	13.1 (5.2)	14.6 (4.9)	< 0.01
General perceived control – mean (SD)	25.6 (2.5)	27.5 (3.1)	< 0.001
General self-efficacy – mean (SD)	25.7 (5.0)	27.9 (4.5)	< 0.001
Outcome expectancies (positive) – mean (SD)	17.3 (2.5)	18.1 (2.5)	< 0.01
Outcome expectancies (negative) – mean (SD)	14.0 (2.0)	13.2 (2.7)	< 0.01
Food involvement – mean (SD)	42.1 (4.7)	44.4 (4.5)	< 0.001

Fifty-six percent of the women had qualifications up to and including GCSE level, and 12% had degrees or equivalent qualifications. Women of lower educational attainment were significantly younger and had more children than women of higher educational attainment, but there was no difference between the groups in their dress size. Women of lower educational attainment tended also to have less social support for healthy eating, were more likely to be food insecure, have a lower sense of well-being, less general control, lower general self-efficacy, lower positive outcome expectancies and food involvement, and higher negative outcome expectancies.

Table 4 shows the average weekly consumption of the 20 foods on the FFQ by all women in each quarter of the prudent diet score. This shows that increases in prudent diet score were accompanied by increases in women's consumption of wholemeal bread and a range of vegetables and salad items, and decreases in their consumption of chips and roast potatoes, meat pies, sausages, white bread, Yorkshire pudding and pancakes, crisps and snacks, and added sugar. A higher prudent diet score therefore reflects a diet that is more in line with current dietary recommendations (193).

Women of lower educational attainment tended to have lower prudent diet scores than women of higher educational attainment ($r = 0.40$; $p < 0.001$), and were thus eating more high fat, energy dense foods, such as sausages, chips and crisps, as indicated in Table 4. Educational attainment alone accounted for 16% of the variation in the prudent diet scores of these women. Younger women were more likely to have lower prudent diet scores ($r_s = 0.22$, $p < 0.001$). Having more children living in the home and wearing a bigger clothes' size were not associated with differences in prudent diet scores.

Table 4 Median weekly portions of 20 foods per quarter of prudent diet scores for 372 women

	Lowest scores			Highest scores
Foods	< -0.7 SDs (n = 88)	>-0.7 to <-0.1 SDs (n = 94)	>-0.1 to <0.6 SDs (n = 98)	> 0.6 SDs (n = 92)
Chips & roast potatoes	1.5	1.5	1.5	0.5
Peppers & watercress	0	0.25	1.5	1.5
Tomatoes	1	1.5	4.5	4.5
Meat pies	0.5	0.25	0.25	0
Vegetable dishes	0.25	0.25	0.5	4.5
Courgettes, marrow, leeks	0	0	0.25	1.5
Sausages & sausage rolls	1.5	0.5	0.5	0
Gravy	1.5	1.5	1.5	0.25
Green salad	1.5	1.5	4.5	4.5
Wholemeal bread	1	1.5	4.5	7
White bread	7	4.5	1.5	1
Onion	1.5	1.5	4.5	4.5
Vegetarian food	0	0	0	0.5
Pasta	1.5	1.5	1.5	1.5
Yorkshire pudding & pancakes	1.5	0.375	0.25	0
Crisps & snacks	7	4.5	1.5	1.5
Beef	1.5	1.5	1.5	0.25
Spinach	0	0	0	0.5
Added sugar (daily in tsps)	3	1	0	0
Full fat milk (in pints)	0	0	0	0

The FFQ prompt card provides definitions of these food groupings (Appendix I).

Table 5 shows the Cronbach's alphas calculated for each scale to assess their internal validity. The coefficients were considered to be satisfactory for all the scales.

Table 5 Cronbach's Alphas for all scales

Scale	Cronbach's Alpha
Social support for healthy eating	0.60
The WHO-5 Well-being index	0.80
General control	0.63
General self-efficacy	0.85
Outcome expectancies – positive	0.73
Outcome expectancies – negative	0.67
Food Involvement Scale	0.63

Correlations between all the psychological and social variables, and between them and prudent diet score, were calculated separately for women of lower and higher educational attainment. Table 6 shows there were fewer significant correlations between these variables and prudent diet score in women of higher educational attainment than there were in women of lower educational attainment. This suggests that these psychological and social factors may have less influence on the diets of women of higher educational attainment.

In women of lower educational attainment perceived control was correlated with both general self-efficacy and well-being, in line with expectations. Positive outcome expectancies were correlated with all except food insecurity, unlike negative outcome expectancies which were only correlated with positive outcome expectancies and food insecurity.

Table 6 shows five variables were significantly positively correlated ($p<0.01$) with prudent diet score in women of lower educational attainment: social support, general control, general self-efficacy, positive outcome expectancies and food involvement. Women who scored more highly on any of these variables had higher prudent diet scores.

Table 6 Correlations between prudent diet and all psychological scores

Women of lower educational attainment (below the diagonal) and women of higher educational attainment (above the diagonal)

	Social support for healthy eating ~	Food insecurity #	Well-being	General perceived control	General self-efficacy	Outcome expectancies - positive	Outcome expectancies - negative	Food involve-ment	Prudent diet score
Social support for healthy eating ~	-	- .01	.16*	- .01	.19*	.17*	- .01	.13	.23**
Food Insecurity #	- .01	-	-.32**	- .35**	- .24**	- .09	.13	-.10	- .10
Well-being	.14*	-.22**	-	.35**	.35**	.03	-.18*	.21**	.23**
General perceived control	.09	- .31**	.35**	-	.48**	.05	- .41**	.21**	.08
General self-efficacy	.18**	- .22**	.28**	.34**	-	.06	- .35**	.18*	.10
Outcome expectancies – positive	.22**	- .02	.18*	.07	.24**	-	.10	.16*	.06
Outcome expectancies – negative	.00	.22**	-.10	-.12	-.02	.20**	-	-.15	- .09
Food involvement	.10	- .08	.13	.18**	.24**	.16*	-.06	-	.19*
Prudent diet score	.19**	- .08	.12	.22**	.24**	.37**	-.00	.25**	-

* p<0.05; ** p<0.01

Spearman's correlation coefficients

~ Variable was log transformed

The five variables shown to correlate with prudent diet score were entered into a regression model to assess their independent contribution to predicting a prudent diet in women of lower educational attainment. General self-efficacy did not make a significant independent contribution, leaving four variables remaining in the final model: general control, positive outcome expectancies, social support and food involvement (Table 7). The beta values indicate that a one point increase in each scale would be associated with a 0.07 (general control), 0.11 (positive outcome expectancies), 0.02 (social support) and 0.03 (food involvement) standard deviation increase in prudent diet score. None of the possible confounders (age, number of children, qualifications) were significantly related to prudent diet score, and they did not add anything significant to the model shown in Table 7. The final regression model explained 22% of the variance in prudent diet scores.

Table 7 Regression analysis: Significant predictors of prudent diet score in women of lower educational attainment (mutually adjusted) n = 204

Variable	Beta	95% CI	P value
General control	0.07	(0.02,0.12)	0.009
Outcome expectancies – positive	0.11	(0.06,0.15)	0.000
Social support	0.02	(0.00,0.05)	0.045
Food involvement	0.03	(0.00,0.06)	0.027

The same regression analysis was then run for all women of higher educational attainment. The only significant contribution was made by social support, as would be expected from the correlation coefficients produced for these women. A model using the only three variables shown in Table 6 to correlate with prudent diet in women of higher educational attainment, showed that social support and well-being explained 10% of the variance (Table 8). The third variable, food involvement, did not make a significant independent contribution to predicting prudent diet in women of higher educational attainment.

Table 8 Regression analysis: significant predictors of prudent diet score in women of higher educational attainment (mutually adjusted) n = 163

Variable	Beta	95% CI	P value
Social support	0.03	(0.00,0.05)	0.036
Well-being (WHO-5)	0.03	(0.00,0.06)	0.030
Food involvement	0.03	(0.00,0.06)	0.079

4.4 Discussion

The aim of the Nutrition and Well-being Study was to measure the impact of key psychological and social influences on the diets of women of lower and higher educational attainment. We wanted to understand the role of these variables in explaining why women of lower educational attainment ate a poorer quality diet than women of higher educational attainment. Additionally, we wanted to assess why some women of lower educational attainment eat better diets than others, as this might help us understand how to help those with poor quality diets to make improvements. Findings from focus group discussions had suggested that the key might be differences in the influences on self-efficacy, and perceptions of control (181;184), concepts fundamental to Bandura's social cognitive theory (111;114).

The findings confirmed that women of lower educational attainment were generally eating poorer quality diets than women of higher educational attainment. They also tended to have: less perceived control over their lives; lower general self-efficacy; less social support for eating healthily; lower sense of well-being; more food insecurity; lower expectations of positive outcomes from healthy eating and more negative ones, and less involvement with food than women of higher educational attainment. Hence women of lower educational attainment did worse on all the social and psychological measures than women of higher educational attainment. These findings therefore broadly support conclusions from the focus group study (Chapter 3).

Regression analysis showed that some of these psychological and social factors affect the diets of women of lower educational attainment in a way they do not affect the diets of women of higher educational attainment. In women of lower educational attainment,

feeling less in control over life in general, giving food a lower priority, lacking social support for healthy eating, and expecting fewer benefits from eating healthily were all directly and independently associated with having a poorer quality diet. This suggests that finding ways of encouraging women of lower educational attainment to feel in control of their lives may lead to them feeling more able to provide a more varied and balance diet for themselves and their families. We can speculate how increasing a woman's sense of control might be achieved, and this is addressed in the final chapter of this thesis when considering the design of an intervention to improve the quality of women's diets. In women of higher educational attainment, there was no significant effect of general self-efficacy, perceived control, food involvement or outcome expectancies on the quality of their diets. However, as in the group of women of lower educational attainment, lacking social support for healthy eating had the direct effect of reducing their quality of diet. The only other significant influences on the diets of women of higher educational attainment were well-being and food involvement. However, in regression analysis food involvement no longer made an independent contribution to predicting a prudent diet. This suggests that as long as these women have support for eating healthily and are feeling in a positive mood, they are able to eat a healthy diet regardless of how interested and engaged they are with food.

We therefore met our aim to understand more about the relationships between the social and psychological influences we measured and the quality of young women's diet's. We identified where these influences were significantly different for women of lower educational attainment compared with those of higher educational attainment.

4.4.1 Strengths and limitations

As the data are cross-sectional, relationships between variables cannot be assumed to be causal. Our study population were not drawn from the general population of women of childbearing age in Southampton, and hence could not be said to be representative. In order to ensure adequate representation of women of lower educational attainment, we took a purposive approach by recruiting women attending Sure Start Children's Centres. These centres are intended to serve all families with children under five years, with a particular focus on engaging the more disadvantaged populations in Southampton. Despite this strategy, our study population represent the whole range of educational attainment. In our analysis we decided at the outset to define "lower" educational attainment as "up to and including GCSEs". This could be viewed as an arbitrary cut-off, and an argument made for defining lower educational attainment as having no academic qualifications. However, using this definition to recruit to the lower

educational attainment focus groups in the earlier phase of this research proved to be a sensible approach. Clear differences on influences in food choices had emerged between the lower and higher educational attainment groups, and this survey work wished to measure the hypothesised relationships in these two distinct groups.

It is a strength of this study that all measures of dietary quality and all the predictor variables used in this study have been previously validated and published. Substantial work has been done at the MRC Epidemiology Resource Centre to develop, standardise and validate tools to measure diet in young women (33;34). A FFQ was shown to give a meaningful estimate of nutrient intake and information on broad dietary patterns in adolescents and pregnant women. It had good reliability and reproducibility when assessed against weighed dietary records, food check lists (34), and 4-day prospective diaries (33). The adult FFQ consists of 100 foods, which are grouped for analysis into 49 food groups on the basis of similarity of type of food and nutrient composition, eg root vegetables, processed meats (32). Our FFQ was a shortened version of a longer instrument. Dietary pattern analysis of the original 100-item FFQ produces a 'prudent' dietary pattern that is very similar to that produced by other dietary assessment methods (194). Since the pattern scores are strongly influenced by the foods that characterise it, we developed a short FFQ to assess this axis of variation in diet. There are high correlations between coefficients produced by principal components analysis of the shortened version of the FFQ, and those produced by the original longer version, which suggests that the variability in prudent diet scores in the Nutrition & Well-being Study reflects the variability of diets in the SWS (186). Although all FFQs are subject to bias, they have been shown to identify similar patterns of diet as other dietary methods (194;195).

To conduct research into diet is complicated. There are many possible ways of measuring what people eat, including FFQs, self-completed diaries and weighed records over different time spans, as well as biochemical markers such as folate levels as a proxy for nutrient intake. The literature on food choice and diet uses a range of methods to assess the dietary variables of interest – with some just asking how often fruit and vegetables are consumed, as a marker of a healthy diet. There is no consistency in the way FFQs are developed, what foods are included and how to group these for meaningful analysis of whole diets. For instance in the 1995 Australian National Nutrition Survey (NNS), diet was measured using a retrospective FFQ (previous twelve months) incorporating 107 foods and beverages, of which 88 were food items (196;197). A nine-point scale was used to report frequency of consumption; anything from once a month (2-9 on the scale) was coded as "regular", which could be

considered a rather broad category, including as it does foods consumed as infrequently as once a month and up to more than once a day. Some analysis was done to report socio-economic differences in the consumption of individual foods, but foods were additionally grouped into food types. This included some grouping of what might be considered healthy options with less healthy options, such as groups consisting of white and wholemeal bread, all types of milk, and potatoes in with other vegetables. It is important to bear in mind these categories when considering the reported findings, as it is only possible to discuss the variety of foods consumed, rather than whether it was a healthier diet per se.

A major problem with FFQs is the demand they make on cognitive processes; participants require a reasonable literacy level, good memory skills and the ability to average food intake over periods of time: one year in the NNS (196;198), three months in the SWS (32). These issues need to be borne in mind when reviewing the conclusions from the literature, and in any future attempts to get a measure of diet.

It could be argued that in using both general and specific psychological measurements in the same analysis we might not be comparing like with like. We used a general measure of self-efficacy (190), a measure of general control that included some health items (185), and a specific measure of social support for healthy eating (188). These measures were chosen pragmatically as being most relevant for the issues under enquiry in our target population. General self-efficacy dropped out of the final regression model, whilst general control remained a significant independent predictor of prudent diet. However, replicating the analysis after removing the three items relating to health in the General Control Scale made no difference to the findings. The issue of whether to measure general or specific aspects of psychological and social factors is the subject of some contention. Some studies that have examined the effects of self-efficacy and social support on diet have tended to use measures specific to dietary change (81). However, other studies have found more general measures of social support to be associated with specific measures of dietary quality, such as fruit and vegetable consumption (199). There are those who maintain that global (or general) control beliefs are more important in predicting people's health behaviour than domain specific control beliefs, such as those which relate to diet or food choice, because general control beliefs may have more impact on coping abilities especially for vulnerable populations such as our women of lower educational attainment (136). According to Walker (2001), Bandura himself denied that self-efficacy only concerned specific behaviours in specific situations. He felt that the concept reflected people's beliefs in their ability to cope with general stressors in their lives (117). Leganger and

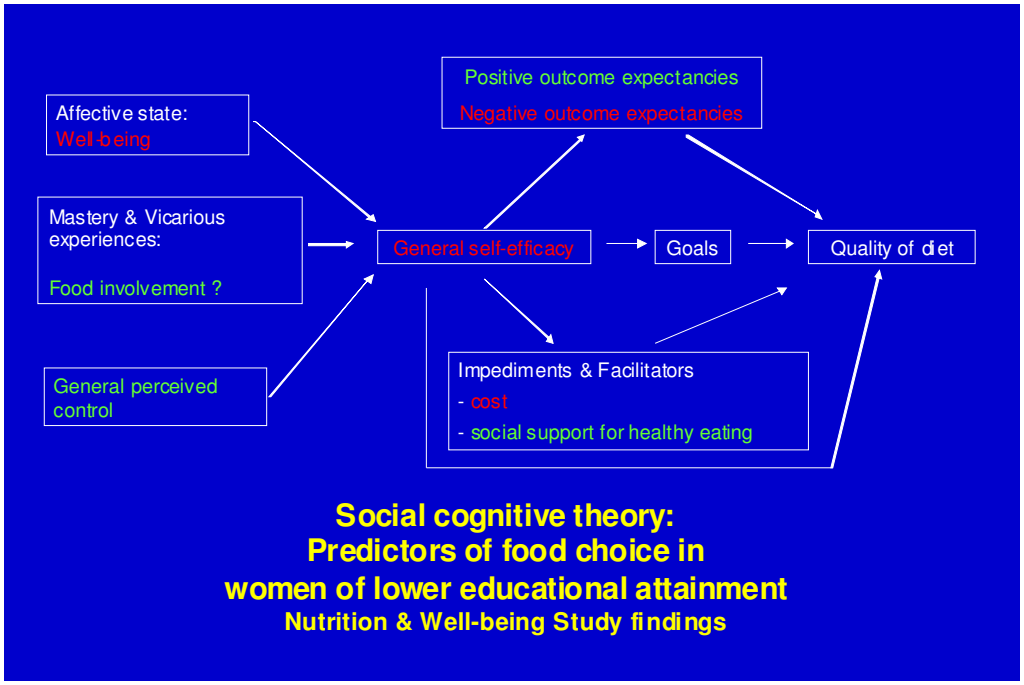
Kraft (2003) found a close correlation between general self-efficacy and specific self-efficacy for eating fruit and vegetables, which they interpreted as an indication that general self-efficacy exerts its influence over behaviour through self-efficacy specific to each health behaviour (40). If this is the case, then just measuring general self-efficacy might offer a meaningful proxy.

4.4.2 Conclusions

These findings have implications for the use of Bandura's social cognitive theory (111;114) in understanding the factors that influence women's food choices. For women of lower educational attainment, general self-efficacy proved not to be as strong a predictor of quality of diet as general control. Social support for healthy eating was included as what Bandura would define as a *facilitator* to action, such as making healthier food choices, and proved to be important for eating healthily. But food insecurity did not figure as a significant *impediment*, nor well-being (a marker for affect) as a possible predictor through its influence upon self-efficacy. Positive, but not negative, outcome expectancies made a significant independent contribution to the final regression model, predicting quality of diet in women of lower educational attainment. Finally, women of lower educational attainment who are more involved with food, eat a better quality diet. Food involvement may be a marker of mastery and/or vicarious experiences, in that those who have positive food-related experiences may be more likely to enjoy food-related activities. These findings illustrated the difference between women of lower and higher educational attainment. Social and psychological factors played a greater role in predicting the quality of the diets of women of lower educational attainment compared to those with higher educational attainment.

Figure 6 shows how our findings might map onto a model based on Bandura's model. The implications of this test of Bandura's social cognitive theory (111;114) are discussed in detail in Chapter 6, when considering the overall contribution of this work to understanding the food choices of disadvantaged women.

Figure 6 Bandura's social cognitive model in relation to significant predictors of food choice in women of lower educational attainment.



In green = significant independent predictor of prudent diet

In red = not predictive of prudent diet

These findings pinpoint a number of social and psychological factors we would have to address to improve the diets of women of lower educational attainment. The next step, and the third aim of this thesis, is to understand how we can translate these findings into improvements in diet. To do this we need to speak to practitioners in the city to explore some of these findings and gauge their views on bringing about dietary improvements for the families with whom they work.

Chapter 5
Expert Panel Discussion

5.1 Introduction

The previous two phases of data collection identified factors that influenced women's food choices and quality of diet. It would appear that if we are to improve the quality of diets of women of lower educational attainment, we need to address their perceived control over life, as well as the factors appearing to contribute to this sense of control; we found these to be the support they receive from friends and family for healthy eating, their involvement with food, and their beliefs in the benefits of eating healthily. How might we do this?

Aim 3: The final phase of this research project was to explore how the findings from phases one and two can be translated into an intervention to improve the diets of disadvantaged women.

This chapter describes the conduct and results from an expert panel focus group with members of staff from Sure Start Children's Centres in Southampton.

If we are going to use our understanding of what influences some women of lower educational attainment to eat more healthily (181-184), we need to know more about how to translate this understanding into action to improve the diets and lifestyles of this population of women generally. The people who might be best placed to help us with this challenge and inform the next phase of the research project, are the practitioners who work most closely and most regularly with our target population. This chapter presents the findings from an expert panel focus group held with staff working largely within Sure Start Children's Centres (SSCCs). They were asked to consider our findings within the context of the work they do around improving the health and nutrition of the families they see.

The previous two data collection chapters describe how participants in our research were recruited from within SSCCs, as a pragmatic approach to accessing our target population. Any intervention we develop will have the same issue regarding access to these women, so it will be necessary to seek further support from Sure Start managers and staff. SSCCs seem to be the ideal vehicle for the delivery of an intervention, as they do reach a large proportion of the most deprived communities. Characteristics of

socioeconomic status, such as educational attainment and income tend to cluster together, so it is inevitable there will be many women with lower educational attainment living within these communities. It is therefore timely to consider the origins of the organisation and what opportunities it might afford us to intervene to improve the diets of disadvantaged women and their families.

At the heart of the Government's plans to deliver better outcomes for families with children under 5 years old within communities most in need of support, Sure Start Local Programmes (SSLPs) were area-based interventions set up in England between 1999 and 2003 to promote health and development, and reduce inequalities(200). The Early Years, Extended Schools and Special Needs Group, within the Department for Children, Schools and Families, is responsible for delivering Sure Start. Specifically, the main aim of SSLPs was to improve the health and well-being of young children living in disadvantaged neighbourhoods by preventing the transmission of inequalities in health, poverty, school failure and social exclusion between generations. The original programmes were area-based, targeted to 20% of the most deprived areas in England, with programmes managed by a partnership of health, education, social services and voluntary sectors. Initially the SSLPs did not have a prescribed set of services, instead each local programme was responsible for working with the community to improve existing services according to local needs while covering core services, ie: outreach and home visits; support to families and parents; support for good quality play, learning and childcare; primary and community health care; and support for children and parents with special needs.

During 2004-06 SSLPs evolved into Sure Start Children's Centres (SSCCs), thus changing their model of service delivery. The changes involved clearer specification of services, with an emphasis on child well-being and the need to reach the most vulnerable, and the adjustment of service provision according to family disadvantage. The most recent evaluation of the effects of SSLPs on 3 year old children and their families compared with non-SSLP areas, showed no evidence of adverse effects and 5 out of the 14 outcomes analysed showed positive SSLP effects (201): children showed better social behaviour and more independence; parents showed less risk of negative parenting and provided a better home-learning environment; and families used more services designed to support child and family development. This last finding may explain the other four findings, which suggests SSLPs are moving in the right direction. The report concludes that changes made when SSLPs developed into SSCCs, with more clearly focused and specified services, appear to be leading to even more

beneficial effects for children and families in improving parenting and children's well-being. Further evaluations are awaited to confirm whether this is the case.

The first Sure Start programme began in Southampton in 2000, establishing Southampton as one of the Sure Start pioneers. Since 2008 the whole city has been covered by the programme, with some areas getting more resources depending on need, eg high priority areas with larger numbers of disadvantaged families. Sure Start brings together a range of local agencies and is thus well used to multi-agency working. They are at the forefront of providing health and social care, and as such are an ideal organisation with which to collaborate in any initiative to improve outcomes for disadvantaged women and their families. It is key therefore to understand a little more about the structure of Sure Start and identify any systemic barriers to bringing about positive changes in our target population.

Previous research has identified the practical difficulties of researching public health nutrition interventions in disadvantaged communities, highlighting that participant burden is likely to contribute to low retention rates (202). There are challenges and limitations of using the "gold standard" randomised controlled trial design in real world interventions. In hard-to-reach populations, such as our target of disadvantaged women, alternative approaches need to be considered. These populations can lead challenging, chaotic lives, making it difficult for them to engage with the research process, reducing recruitment and retention numbers. For this reason we acknowledge the importance of involving community workers who regularly engage with vulnerable families in our plans for intervention, and of hearing their perspective on our findings. They can help us move forward and take the most effective next step.

Thus to translate our observations from the first two phases of work into an intervention, it was essential to hear what the "practitioner/experts" had to say about improving the diets of women living in disadvantaged areas of Southampton. The Children's Centres were invited to send members of staff having regular contact with our target population to attend an expert panel focus group to reflect on our research findings and tell us about their experiences.

5.2 Method

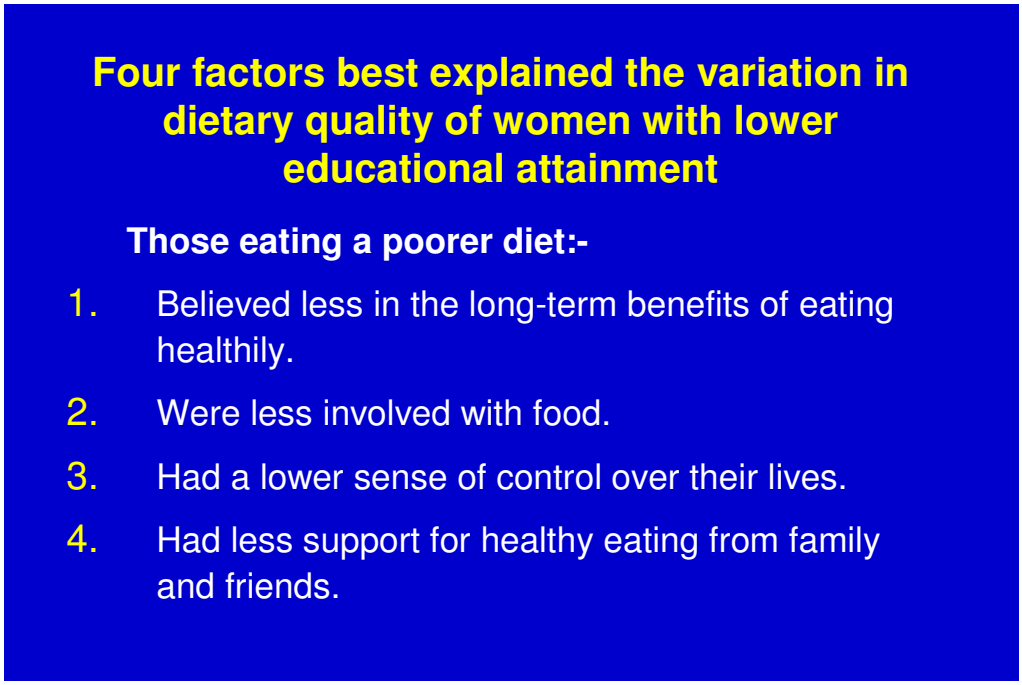
5.2.1 Participants

Practitioners employed in the city of Southampton, either working for Sure Start Children's Centres, the health visiting team or Health Trainers programme were invited to attend by email or phone call. This was a purposive sample, with those invited being individuals known to the research team from previous stages of the research, or nominated by those contacted. A range of perspectives was sought, so there was a very open, flexible approach to recruitment. To bring an alternative viewpoint, three academics from the areas of public health epidemiology and human nutrition, and known to the research team were also invited.

5.2.2 Procedure

The participants were invited to attend the focus group at a local health centre in July 2008. The moderator's aim at the outset was to encourage participants to reflect on the challenges that we might meet in translating our observations into an intervention in the city. A discussion guide was therefore drawn up to broadly cover issues such as engagement of the women, service delivery, evaluation, and difficulties in changing behaviour (Appendix L). Throughout the discussion, a slide representing the four key influences on food choice identified by the Nutrition & Well-being Study was displayed (Figure 6). This was introduced by the moderator.

Figure 7 Introductory slide for Expert Panel Focus Group



The moderator was assisted by an observer who made field notes and helped with the refreshments. All participants signed consent forms (Appendix M) and agreed to the discussion being tape recorded.

5.2.3 Analysis strategy

The recorded session was transcribed verbatim, and the material was sorted into themes identified from the discussion, using the method specified by Boyatzis (162). Unlike the Focus Group Study described in Chapter 3, there were no a priori categories for this discussion. The moderator read and reread the transcripts, bearing in mind the purpose of the study which was to find out what the experts in Southampton had to say about translating our observations into an intervention to improve the diets of women in disadvantaged areas. A coding frame was developed to allow for summarising and indexing of the experiences described and opinions expressed in each transcript, by cutting the data into meaningful segments and pasting into new documents for each theme. The data under each theme were summarised and verbatim quotes used to illustrate. After each reading, a thematic map was produced to illustrate each way of looking at the data. At each subsequent reading, this evolved with accompanying changes to the coding frame. This iterative process was repeated four times, until the thematic map provided a parsimonious model of the discussion. At this point, a second

researcher coded a segment (just over a third) of the transcript for validation purposes. Both researchers then met to discuss the few minor disagreements in detail, and the final coding frame (Appendix N) and thematic map (Appendix O) were refined one last time following these discussions.

5.3 Results

There were thirteen participants: seven staff members from Sure Start Children's Centres, two health trainers, one health visitor and three members of academic institutions, one of whom was male; the rest of the group were female.

Table 9 Expert Panel Focus Group: Participant profile

Role	Age	Gender
Children's Centre Co-ordinator	54	F
Locality Lead Co-ordinator	54	F
Family Support Worker	44	F
Children's Centre Manager	47	F
Community Health Development Officer	49	F
Family Support Worker	37	F
Family Support Co-ordinator	57	F
Health Visitor	36	F
Health Trainer	50	F
Health Trainer	35	F
Senior research fellow	43	F
Lecturer in human nutrition	31	F
Professor in human nutrition	56	M

Emergent themes described in the final thematic map were "Gaining the Women's Trust", "Meeting Needs" and "Bringing about Change". These appeared to capture the essence of each part of the discussion and will be presented in turn, with accompanying quotes as illustrations of the sub-categories within each over-arching theme.

5.3.1 Gaining the women's trust

Discussion around how the staff went about engaging hard-to-reach populations, was dominated by description of the strategies they used to gain the women's trust. This was not always explicit in what was said, but can be encapsulated under the following sub-headings.

5.3.1.1 Stability

Much of the conversation revolved around how long Centres had been in each area of the city, and how this dictated what kind of engagement could be expected of the local population. Participants agreed that the longer a Centre had been operational, the better the level of engagement and hence the smaller their hard-to-reach population.

> *'It's existed longest in Southampton and the hard-to-reach group's got narrower and the other program you're talking about is quite a new program, so their hard-to-reach group is bigger. So we've got a very very small amount that we don't reach at some point in any one year.'*

They felt the women could only begin to trust their service, if they believed they were here to stay, and thus felt there was a sense of permanence in what was being provided.

> *'There's been lots of things, initiatives that have come and gone. And that's the reaction I've had in the 18 months I've been in post that you know, "how long is this going to stay for?" and I say "we're here for the full term …'*

They also agreed that the kinds of services offered were also determined by how long the Centre had been in existence, as again the women needed to have built up their trust over time.

> *'That's something particular that that particular project is going to do because it's actually in the 8th year of existence, it's probably easier to do that. But it depends on where you are in your development.'*

Where people were newer in post, they talked about the pro-active approach they took to build up this trust over time.

> *'I've been in post 7 months so kind of I'm a newey to the post if you like and it takes a while, it's kind of a drip feed effect. It could be the telephone call once every 2 weeks. It could be 2 visits in a week to build up that core relationship, which then they access Sure Start hopefully.'*

All these examples illustrate the importance of building trust over time, and adopting different approaches in different areas depending on how long the Centre or staff had been established. Linked to this was the next sub-heading.

5.3.1.2 Buildings / Sure Start "brand"

It became clear that the participants believed strongly that having a central location was key in gaining the women's trust and engagement in Sure Start.

> *'When they come into these centres that we build, they actually feel valued and it is very difficult if you are delivering some of those in maybe a church that's full, that's echoey, not very user-friendly and we've been very fortunate to develop some really fantastic buildings across the city that are welcoming and have the right atmosphere to make you feel when you come in "oh actually this is really nice in here". And that makes you want to stay whether you've accessed that particular group or not.'*

If there was no central location, they felt the women could still be encouraged to engage if the Sure Start "branding" was visible enough.

> *'They learn to recognise the logos quite often as well. They think "oh that's the Trust, that's the PCT logo, that's the Sure Start logo, oh I'll go in and ask, they'll know".'*

This trust in Sure Start was perceived to be down to the fact that the women felt differently about Sure Start than they do about other services.

> *Participant 1: '… I don't think they see it as part of the establishment. It's a label that isn't labelled "local authority".'*

> *Participant 2: 'They see it in a different way don't they, that logo it's different to them.'*

A visible presence, like a building, with the Sure Start label was perceived to be key in engaging the women initially, and from this point the staff then worked on building relationships with them in order to gain their trust.

5.3.1.3 Building relationships

There was some discussion on ways to build relationships with the women, once they had begun to trust Sure Start and its staff. In some cases, this entailed making them feel valued, which was perceived as being a novel experience for some of this population.

> *'… you might be the first person that's said "well done", you know so they then feel supported and valued, so they can make the next step. And you know, you said about engaging them in groups, you know making that phone call and saying "we missed you today" and actually to say "we missed you" – "what you missed me?" you know "who misses me? I'm not important". You know this is what some of these women are feeling like. They don't feel important, they don't feel that they've got something to say, they don't feel that they've got control. So you ring them to say "Are you ok? We missed you today".'*

Another way to build trust and engagement was to enhance the women's self-esteem.

> *'their self-esteem improves, they become valued, they become, feel supported and so they can go onto the next step.'*

The staff were clear that building relationships with the families was key in ensuring they accessed the range of services Sure Start offer.

5.3.1.4 Multi-agency working

A bonus of having a central location was the ability to accommodate staff from a range of agencies under one roof, which was also considered to be useful for building relationships. Thus a team of people could support families and encourage them to engage with the services on offer.

> *'So we have different levels that we can re-engage with families with our health visiting, family support workers, all different agencies.'*

This raised the issue of ensuring the women were supported with consistent information.

'And consistent messages, I think that's the important thing. The same message has to be given by everybody. So then people aren't confused as to what they're supposed to be doing.'

They reflected on the ways they attempt to do this, in order to ensure the women's buy-in to the services offered.

'I think it's important for the agencies working within areas to give out the same messages and I can only speak for Northhill obviously 'cos that's where I work but we do have inter-agency meetings … so over time … we all talk to each other, we all work together. I mean Jane comes along to the meetings 'cos she's the Northhill Health Trainer and we do try and do lots of joint workings. Yesterday I was working with Sure Start in the school, so I'm employed by Southampton City Council as a County Health Development Officer, but you know I was working as a Sure Start worker.

This highlighted the complexity of working with this population, and the importance of communication across agencies in order to maintain the women's belief in the system.

5.3.2 Meeting needs

The second major over-arching theme was that of meeting needs of both staff and women. The participants were encouraged to think about what issues they faced delivering appropriate services to their target population. What emerged from these conversations was the sense that there were many needs to be addressed: those of the women, to do with engaging them in activities to meet their perceived or expressed needs; plus those of the staff, for example, training and also the need to know what was working and for their effort to be recognised.

5.3.2.1 Women's needs – engagement and activities

A great deal of conversation focused on meeting the perceived needs of the women attending SSCCs. This encompassed the strategies used to get them engaged with the services provided, and a whole range of activities around nutrition were discussed.

'We do work around mental health, we do home safety visits, we do food, we do food tasting sessions, we go into the playschool. Like Josie was saying, we do lots of different fruit tasting, we do pitta bread baking, we do wraps.'

Some activities focused on encouraging women and children to try novel foods on a drop-in or ad hoc basis, whilst some offered a more structured approach, with courses running over a period of time.

'And so Pam would identify families for me, who would then come along and do my cooking courses, 'cos we do have the 'Eating on a Budget' and we do 6 week courses ...'

The staff were able to articulate and reflect on the reasons why offering a range of activities was important.

'I think you've got to offer mixed delivery. So if some, one of taster session and courses is the answer. Because some people will never attend a 6 week course but you might actually get them along to a healthy eating event.'

There was also the acknowledgment that whatever they offered, it was down to the women to be prepared to access activities.

'The thing is they make the decision themselves don't they? They'll come once and maybe they won't come back but then they might ring you 3 or 4 weeks down the line and say "actually I wasn't ready then but I think I am now".'

Staff felt they were guided by the expressed needs of their population, working with them rather than forcing any activities upon them, but at the same time taking all available opportunities to impart relevant knowledge and skills.

'I was going to say I think it's very client-focused. They come in and the initiative is there but they take it on at their own speed and they make suggestions that work for them and you think "well actually that's quite a good idea". You just sort of end up going with their flow but giving them the healthy information on the way.'

The staff were also conscious of not just the reach of the Centres but also keeping the families interested in what was on offer.

> *'But I do still think that there's a lot we could perhaps look at more about identifying those that appear to drop off the radar. They'll come in and do a group and then they don't come to something else but that again, it's about allocating time and resources.'*

Meeting women's needs was thus not just about laying on services and activities, it was about getting them interested and willing to come along – particularly the most hard-to-reach. This was a cause of concern and focus of the staff's efforts.

> *'Now is it because they're finding them too much the samey? It's all the same activity? Would they like to see something different or is it something that existed in the early days that doesn't happen now, that they'd like back?'*

Whilst perhaps traditional incentives (money, vouchers etc) are not an option within the Children's Centres as they may be in other parts of the world, the staff will listen to the women and lay on activities they request, as an incentive to get them engaged.

> *'It's putting on incentives as well. I know in Cantrel we have a first time parents group, so we put on baby massage units 'cos that's what they want.'*

They also acknowledged that the families have a key role in determining what is offered. Families saw Sure Start as existing for them – in some way they "owned" it.

> *'And that is about that engagement, having a say in the service delivery, feeling that they own it but I think families do feel they own Sure Start, that's what comes across really, it's theirs.'*

This section highlighted how the staff aimed to meet what they perceive to be the varying needs and expectations of their target population, rather than providing activities and services in a purely prescriptive, top-down manner.

5.3.2.2 Staff needs – training

The staff's strongest expressed need was for training to help them work effectively with families from different cultures. With many different cultures represented in the SSCCs, and a great deal of movement across locations, the staff were aware of some shortcomings in their knowledge and skills.

> *'Sometimes with the difference in culture, it's quite difficult to know exactly what the constituents of their diet are. With the Polish families we find this as well. Some of the soups I think have quite high salts. So it's lack of knowledge within our services as to what constitutes their diet.'*

Others identified some gaps in the knowledge and skills required to carry out their role effectively. One specific need was for training in carrying out effective groupwork. For some of them this was an important part of their and their staff members' role, but they had not been trained in how to run groups.

> *'I think it's because we have such multi configured teams with different skills that we might recruit somebody for a particular role and there's always an assumption that they can do it all … and group work is a specific skill and we recruit people for individual roles and assume they can actually work with groups and that's actually very difficult to do.'*

Keeping their own and other staff members' skills and knowledge up-to-date was seen as a priority, and training was accepted and welcomed in principle. However, in practice there were limited training needs expressed in the discussion.

5.3.2.3 Evaluation – feedback and measuring outcomes

It was clear from the discussion that various forms of evaluation are an integral part of the work of SSCCs. Participants in the focus group acknowledged the responsibility they have to deliver this as part of their role.

'I think within the Children's Centre programmes there has been inbuilt evaluations, what we tend to do is … in-depth evaluations on particular bits of work. And some of the stuff we've modelled at Townes is evaluated under Every Child Matters headings and we've got different settings and different bits doing that at different periods.'

Their role in evaluation was largely to keep registers and assess simple outcomes, such as satisfaction with the activities they put on.

'We usually keep registers and I get verbal feedback usually and we do it in all sorts of ways. We do like sort of smiley picture faces or sad picture faces or you know, "what did you like here today?", "what did you not like about today?", "is there anything we can do better?" So you keep it quite simple sometimes on how the evaluation is fed back.

Staff were aware that there were other kinds of evaluation information as well.

'There is some through some of the monitoring that we collect. There is actually available obesity levels in the city which have shown that, particularly with Townes, a declining obesity in children … so that's really good data really 'cos it's, you know it's hard data that we can accept and we hope that that has been the impact of the Sure Start programme because it has been there for such a long time and that partnership working with health and delivery that has had that impact.'

The staff also welcomed feedback on their own work and did not feel threatened by this kind of external assessment of their practice.

'I actually think it's quite useful … to actually get someone external to look at things, 'cos they can quite often identify something you've missed.'

They believed they were doing important work well and sought recognition of this.

'We'd love it more in health visiting because we've got commissioning coming on much more strongly and to be able to actually say this is really good, this is what we do, capture all that gold dust that's done and you've sort of dusted under the table. You just don't capture it enough and evaluation would really be a help.'

This suggests that perhaps staff do not receive enough reinforcement for the work they often do under difficult circumstances. It may be important to address this if the workforce is to continue to deliver essential support and services to this vulnerable population.

The negative aspects of collecting so much data about and from the families were also raised. There was a perception that families attending SSCCs were fed up with filling in evaluation forms.

They are so evaluated-out because every project has got funding and we all have milestones to hit, we all have to do evaluations and whatever people attend, they have to fill out evaluation forms … and they're tired of it.'

Staff expressed a desire for easy-to-complete evaluation forms rather than what they perceived to be more complicated research tools.

'Simple, easy-to-use measure. Not an academic tool that you would be using for a research project.'

The need for evaluation coupled with the desire not to overburden participants or staff with complicated measurement tools, is one of the challenges faced in assessing processes and outcomes in real world settings.

5.3.3 Bringing about change

The final theme that generated much discussion was about the facilitators and barriers to change. How could services be delivered and diets improved, to attain the ultimate goal of better general health for Sure Start families?

5.3.3.1 Resources

Not surprisingly perhaps, a lack of resources was seen to be a problem for the efficient and sustainable delivery of SSCC services. These resources affected the capacity to deliver services.

> *'I think some of it is about capacity for us to deliver that constant engagement. Because we are talking about high numbers of children here and high numbers of families and at times because of service delivery, vacancies and posts, sickness, some of the services are very stretched and that's just like another added pressure. Sorry to sound a bit negative but it's the truth.'*

The staff were well aware of the funding limits they had to work within and the challenges this caused them. However, there was also some reflection on the pros and cons of additional funding.

> *'And there are swings and roundabouts to the funding issue because sometimes if you haven't got the money, it makes services reconfigure to enable that to happen. It isn't always good to have a financial carrot.'*

This surprising comment suggested that more money was not always the answer, and that using what was already available more creatively and effectively might also be a positive move forward. They also discussed some of the inequity that exists within the City, the way money was allocated and withdrawn.

> *'But if it's been there for 10 years and it's pulled out, it's a bit different than the things that happened at Nowthill, which have been for much shorter periods. Nowthill folk, I'm sorry about this, but they do look at all the money that's gone into Northhill and they're always the ones that, they never fit the criteria to hit.'*

This quote illustrated how staff view and compare the funding allocation across the Centres; the inside knowledge they have about how long Centres have been established gives them some insight into the differing impact of funding allocation. This might reflect some underlying tension between staff from different SSCCs about how money is allocated and withdrawn.

5.3.3.2 Influences on women – barriers to change

Our earlier findings from the focus groups and Nutrition and Well-being Study had highlighted some influences on the food choices of disadvantaged women, and the barriers that prevented them from eating more healthily. The practitioners in this focus group gave us their own perceptions of these barriers, which were not very different from what the women had told us at the start of this programme of work.

5.3.3.2.1 Environment

The participants were bleakly aware of how much of an impact the fast food outlets in their areas had on the way their families were eating.

> *'It's very easy with the chippy there, to go to the chippy and I've watched the families. My office is right next door and you get some families who are in there virtually every night. They are the ones we try and tackle and try and get involved; and we also have the issue of, we've got the new redevelopment happening. We've got another 2 fast foods coming onto the estate shortly and that terrifies me because that's you know, if you've got a McDonalds at 99p …'*

Many families did not have access to a car, which meant where there was poor local provision of fresh foods, the women were again seen to be struggling to make healthier choices.

> *'… a lot of my families haven't got access to a car and so they have to do everything by bus and the nearest big supermarket is at Tiberten, which is quite a trek when you've got young children in a pushchair and bags and everything else. That is inevitably going to make an impact. Some of the shops that are there at Nowthill Park just don't stock any fresh vegetables or fruit, or it is very limited.'*

Participants saw the impact of the environment on the way women shopped and ate, and described this as a major issue which was largely out of their control. It is easy to imagine the conflict between providing a range of services to improve the health and social care of these vulnerable populations, and the emergence of increasing numbers of fast food outlets and limited availability of fresh produce.

5.3.3.2.2 Cost

Not surprisingly, the staff often heard the women saying they could not afford to buy healthier foods, and this was perceived to be a big barrier to improving diet.

> *'… they believe they can't afford to eat healthier …and part of it came up about healthy eating, but mostly about eating on a budget. Budgets … the money I think. The budget's the big one.'*

But the staff were clear that money should not necessarily be seen as an impossible obstacle to eating well, and spent a lot of time and energy in trying to convince the most cynical of their women.

> *'I think the thing also is getting them to believe that they can eat on a budget … I'd gone out that Tuesday morning and spent £30 on the food and I said "you know, I can feed a family of 4 for at least 5 days with all this food". One of our established ladies on the estate actually …said to me "I can't afford to feed my family on that" and I said "but that's how much I spent. I'll show you the receipts if you like". And it is about showing them that they can.'*

This perception of the cost of different foods and persuading them of an alternative way of eating – fresh produce versus "chippy" – was the challenge faced by those working with these families. They recognised that there are a range of factors that influence these perceptions and related choices, including the environmental factors like the proximity of fast food outlets, but also the previous experiences of those doing the choosing and cooking of family meals.

5.3.3.2.3 Past experiences

The staff saw evidence that women had not been exposed to a varied range of healthy foods and reflected on how this impacted on their current food choices.

'I know that some of the families that I've come across actually historically their families haven't provided fruit and veg and actually two sisters that came with their children said their parents never gave them fruit. So it's through actually coming to our groups and that we do a lot around healthy eating and food tasting that they'd actually tried some of what I would call quite basic fruits like oranges and things like that because they'd never even tried them.'

It was clear how a strategy such as holding food tasting sessions could be of particular value to people with these kinds of experiences. Associated with this lack of exposure to a range of foods, was the lack of cooking skills exhibited by some of the women.

'It's the more never being taught … to cook or whatever. So that's a huge issue.'

This type of knowledge about their target population was what drives the Centres to put on a range of cookery courses, in the hope that learning new skills in the kitchen will inspire and motivate women to provide a range of healthier meals for their families.

The staff saw examples of disordered and dysfunctional eating habits which they attributed to earlier life experiences.

'and all their problems, as you talk to them, stem from childhood. So they've got to relearn and get over psychological problems to be able to learn to eat properly.

This was a challenge to the staff to think more broadly than just providing taster and cooking sessions if they were to help women to make improvements to their own and their families' diets. Eating was not just seen as a functional, isolated activity; staff saw it as embedded within a context which included an individual's emotional and psychological state.

5.3.3.3 What's achievable / collusion

Staff described the limits of what they felt to be achievable. This was expressed in terms of the changes they expected families to be able to make to their eating habits.

'And I think the other thing is about being realistic about what the changes are we can make. You know, if they're going to cook sausages, let's teach them to put them in the oven with nothing else to cook them or put them with something else rather than expect them to completely change their diet over night.'

They also saw limits to levels of engagement of the women and felt this changed over time. They believed that the complexity of people's lives meant they could not necessarily be consistent service users.

'I think you get drop-out of everything, don't you? …I mean you start a class at college and by the time you finish the class, if you've stayed, probably a third of them have dropped out. So I don't think it's any different with the initiatives we do with regard to our cooking and our other work on the estates you know. Yes there are drop- outs but you expect that.'

They accepted that actually they were not going to be able to force anyone to change their behaviour – it would always be down to the individual.

'It is a step by step process, isn't it and giving encouragement and recognising when people do make some sort of small change and celebrate that and acknowledge that in some way, you know, so that they can take the next step. But you know you can give me the information but you can't make me stop eating the six cream cakes, can you. I have to make that decision for myself.'

There was a sense that behaviour change was likely to come in small steps, not large leaps. This indicated that there may be scope for training the staff to be more confident and effective in bringing about behaviour change. If they merely collude with the women, empathising with the difficulties they face, they may not move them towards making a change. They may not feel it is the right time to do this, or indeed their responsibility, and this needs addressing.

5.4 Discussion

The aim of this phase of research was to explore the "practitioner/expert" views on how we might improve the diets of Southampton women and their families, given what

we have learnt from the focus group and survey work. We wanted to know how our findings from these previous phases of research would be received and what sort of challenges and issues these might present to those working regularly with our target population. We wished to use these insights to begin to understand how to translate our findings into action to improve the diets of disadvantaged women living in Southampton.

To steer the discussion towards addressing the significant findings from the Nutrition and Well-being Study, we presented a slide showing the four main influences on women's diets (Figure 6): those eating poorer diets believe less in the long-term benefits of eating healthily, are less involved with food, have a lower sense of control over their lives, and have less support for healthy eating. This slide remained on show throughout the session. However, despite many attempts to do so, it was hard to engage participants in a discussion about these factors; these practitioners were unwilling or unable to address these issues. This is an interesting finding in itself and will be explored in more depth in Chapter 6. We can speculate that the staff are either not interested in the underlying psychological influences on women's eating behaviour, or are unable to explore them as this is not their area of expertise. Perhaps it is more relevant to them to know what works in bringing about improvements, rather than why it works. As researchers and intervention designers it is our job to be concerned about why and how something works, in order to be clear about what is effective and what is not. However, knowing that psychological factors, such as perceived control, impact on quality of diet is not enough – what do you do with that knowledge to bring about change? There is a call from researchers in the field of health psychology for work to be undertaken to build evidence about behaviour change in order to design more effective interventions (203). It is thus our responsibility as researchers to concern ourselves with these challenges, whilst staff meet their own challenges of engagement and support of vulnerable families.

This latter challenge was clear from the volume of discussion about the issues involved in reaching some individuals in the community, engaging them in activities and keeping them interested – probably the key foci for those working in SSCCs. As previous research has found, it is hard to get vulnerable populations to engage in services (202), and the staff used the discussion session to share their perceptions of these problems, describing a range of methods they used to rise to these challenges. Hence, whilst the aim of convening the expert panel focus group (to discuss how we might address the factors found to influence the quality of women's diets) was not entirely met, we did gain important insights into the issues arising from working with families in the city.

Thematic analysis of the focus group discussion suggested that these issues could be grouped into three main themes: “Gaining the women’s trust”, “Meeting needs” and “Bringing about change”. These are now discussed in light of existing published work, with some preliminary consideration of the implications for intervention.

5.4.1 Gaining the women’s trust

The focus group participants clearly believed that just providing services and laying on activities was not the whole answer to tackling inequalities in health. People need to believe in a service, in its stability and permanence, and this only comes about with the passage of time. Two papers reporting findings from the National Evaluation of Sure Start highlight the effect of time on the ability to observe significant change (201;204). Improvements at a population level are slow to happen, and specifically require evaluation over long periods of time to capture any meaningful changes. Melhuish et al (201) suggest that new knowledge, experience and skills acquired over the seven years of the Sure Start Local Programmes are likely to lead to more effective services for families. This investment over time is clearly viewed as worthwhile.

In the present study, staff believed that the Sure Start brand is seen as trustworthy by families who view Sure Start as an integral part of the community; participants described families as feeling a sense of ownership towards it. They felt this connection could only be achieved over several years and with a great deal of effort from the SSCC workforce. All these aspects were seen to be crucial if women were to trust the service, and only with this trust would they engage. This emphasis on trust was particularly striking and on reflection it is clear why this is seen as so important. Why would people be willing to make the effort to identify and travel to activities, give up their time, mix with new people and perhaps move out of their comfort zone if they were unsure as to whether they were going to get something worthwhile that was still going to be there in weeks or months to come? The difficulties highlighted in this focus group discussion in getting parents to trust and engage with services, suggests that new population-targeted interventions might face an equally long, slow process of recruiting and retaining participants. Researchers have raised these concerns in previously published reports of interventions. Despite a range of incentives, recruitment of participants from disadvantaged communities has proved to be problematic, making it impossible to retain a sufficient sample size for meaningful post-intervention assessments (205). It is acknowledged that engaging hard-to-reach populations is a challenge for intervention implementation and evaluation, and should therefore be considered as important an outcome as behavioural change and health

improvements (206). Other studies have also found high levels of non-attendance and subsequent low levels of change in interventions with people of lower educational attainment, and reflect on the associated difficulties of improving outcomes in disadvantaged populations (141). From this discussion it is clear that SSCC staff have invested heavily in engaging with this population. For this reason it makes sense to use the relationships they have already established to enact any kind of public health intervention.

5.4.2 Meeting needs

Underlying much of the discussion was the idea that both staff and families within the Sure Start communities have a range of needs. We specifically asked the participants to reflect on any training needs they saw for themselves or their colleagues, so it was somewhat surprising that there was not more of a range identified. Requests for training focused on cultural issues existing within the City, around foods unknown to the staff, and how the shift of multi-cultural populations across the City is creating challenges for each SSCC in turn. Other areas of need were only briefly touched upon – one of these being training in group work skills. It is likely that staff are not aware of some gaps in their knowledge and skills base, so cannot be explicit about what training would be useful. It might be our role to identify these gaps and work with SSCC staff to engage them in addressing these gaps in order to find a different way of working that might be more effective in bringing about sustained behaviour change.

Focus group participants talked a great deal about the range of activities the Centres put on for families, aware that the needs of their community are many and varied. Health promotion initiatives have traditionally emphasised the provision of new knowledge, but nutrition education alone is unlikely to achieve significant dietary change, particularly in these vulnerable individuals (207). It must be combined with other initiatives, including those aimed at increasing social support (207). Hence, whilst it might be important to provide information on a range of issues, it is clear that more is required in order to bring about change (207). Staff at SSCCs are well positioned to offer a combination of strategies that are guided by individual needs.

Interestingly focus group participants were very enthusiastic about evaluation – they felt very proud of their work and achievements and wanted to celebrate these. The need to share good practice was also well recognised. There was some hostility towards what was seen as “academic” methods of assessment, suggesting that these tools would be inappropriate or hard to use. This seemed to contradict the participants’

acknowledgment and respect for the value of real "hard" indicators of success, such as obesity rates, birth weights, etc. We can speculate that despite the explicit welcome for evaluation, there may be a certain amount of resistance to academic research in some quarters. This could be due to perceived overload of the SSCC attendees, or the added burden for staff in administering any associated paperwork. All interventions require thorough evaluation, so this issue will need careful thought and further discussion with staff responsible for administering any evaluation tools. Tools that develop from discussions with the staff and participating families may be viewed more favourably, and thus be more acceptable. Previous research found that some established tools were not appropriate for the target population and took note of comments made by their participants in order to argue for a more reliable measure for future research (205).

5.4.3 Bringing about change

The participants were clear that they face a range of challenges in working with the women in the community to generally improve their lives, health and well-being. They acknowledged some problems with resources and how this affected what, and how much, they could do at any time. However, whilst there was a great deal of conversation about funding limitations, there was (surprisingly) not a strong demand for more resources. It could be that the participants are just realistic regarding the chances of getting more resources, and have become adept at making the most of what they have got.

Staff identified several barriers that they perceived to be preventing women from making healthier choices. These mapped on to some of the environmental influences identified in the earlier part of this thesis (181;184), such as money, access to shops stocking healthier items; historical influences, like a lack of exposure to a suitable range of healthy foods in childhood leading to eating disorders in adulthood; and social factors, like less support from family and friends. However, the historical and social factors were only briefly mentioned, with the volume of conversation being about the cost of healthy food, the lack of convenient fresh produce and the number of fast food outlets on their patches. In this way, staff emphasised external, uncontrollable factors rather than blaming the women for the choices they make. This could be seen in two ways – one way is that the staff "collude" with the women in their choices, accepting that the barriers they face are insurmountable and believing that change, where it is possible, could only happen in very small steps. The second view of this is that by taking this empathetic approach to the women and their problems, the staff members

are building relationships with the women, gaining their trust and thus engaging them. This could be an important long-term strategy to bring about change.

It could be that when working with such a hard-to-reach population, indicators of success might have to be scaled down. In these circumstances, success might simply be getting someone to consider taking part in a one-off activity. Expecting someone to attend a number of sessions might be unrealistic. Previous research has highlighted the difficulties in conducting rigorous research and evaluation activities on sufficient numbers of participants to show significant change in outcomes identified at the outset (202;205;208). Thus, success measured in terms of changes in diet might be long-term goals for these workers, built on a foundation of multiple smaller successes. In order to reflect such success in an evaluation, outcomes need to include meaningful differences as well as significant differences. Small, but meaningful goals could be related to process outcomes, such as higher numbers of attendees for certain activities.

5.4.4 Limitations

No claim is being made for the views expressed within this single focus group being representative of all staff working with women in Southampton. However, we did recruit from different work groups from different SSCCs across the city to try and gain a range of perspectives. The original aim was to explore how our findings from the focus group and survey work could be addressed and translated into an intervention to improve the quality of women's diets. It was thought that those working regularly with our target population could provide some important insights in this area. It must be acknowledged that this aim was not entirely met. The participants preferred to discuss the challenges and issues that were pertinent to them when working with disadvantaged families. They provided their perspective on how things currently worked, could be improved and how they might be supported. Hence the insights we gained were not what we expected, but were invaluable in illuminating the nature of the work done by these practitioners. This rather neatly demonstrates that whilst it may be possible to measure psychological constructs and analyse their relationships with diet – such that high perceived control is related to better quality diet – the important question that arises is "so what does this mean?". Perhaps not surprisingly, our participants did not feel able to tackle such a big question! This will be explored further in Chapter 6.

Another limitation concerns the nature of qualitative analysis. Interpretation of qualitative data is to an extent subjective, and another analysis of the transcript could

produce a different reading. Qualitative data require interpretation, and for this we use our skills, beliefs, values and desire to discover something interesting and new (209). Accuracy is always a key goal, and it is acknowledged that analysis may be wrong or deliberately distorted to meet a given agenda. As qualitative researchers we are charged with the responsibility of minimising the likelihood of this happening. In this instance two researchers have worked closely to develop the coding frame and thematic map, producing the final versions that represent the findings discussed above. This was a time-consuming, painstaking endeavour and required many re-readings of the transcript and recoding of the emergent themes. It is therefore felt that the themes identified here are an appropriate and accurate way of viewing the discussion, being broadly representative of the views expressed by the practitioners. These interpretations have subsequently been presented to a range of audiences, including ones including members of our expert panel, and no-one has suggested that we are wrong in our interpretation. In fact many have agreed with our conclusions and believe we have highlighted important facets of the work being done by staff at SSCCs.

5.4.5 Conclusions

Understanding more about how SSCC staff work with disadvantaged families in Southampton, particularly in relation to healthy eating, is crucial for informing the development of an intervention to improve the diets of disadvantaged women. Despite several attempts to direct the discussion towards consideration of the psychological influence on food choice as previously identified in this thesis (181;184), participants did not pursue this line of conversation to any great extent. However, what the participants did tell us about the way they work, the barriers to delivery and change, and the systems that operate to facilitate the services they provide, will help us translate what has been learnt from the early phases of this project into practice, using SSCCs as a vehicle for delivery.


mini moves and grooves
Aren't we brave!
Hello!
child care event
parents forum
SureStart

Chapter 6
OVERVIEW AND INTERVENTION PLANS

In the final chapter of this thesis, I will summarise the research findings from the three data collection phases to show how each of the three aims stated at the outset were met. Then the gaps identified in the literature presented in Chapter 2 are reviewed to highlight how this research has contributed to the body of existing knowledge. Limitations in this research are then addressed. I conclude by suggesting how an intervention to improve the diets of disadvantaged women might be developed in light of the findings presented within this thesis and recent literature on behaviour change.

6.1 Summary of research findings

This research project had three aims:

Aim 1: To understand the influences on the food choices of young women, and how these differ for women of lower and higher educational attainment.

We held eight focus groups with women of lower educational attainment and three with women of higher educational attainment. We set out to explore as broad a range of potential influences on food choice as possible within the groups of women of lower and higher educational attainment. The intention was to try and understand the differences in the influences on these two groups of women in order to explain why women of lower educational attainment have a poorer quality diet. The original categories used to explore and code the topic of influences on food choice were environmental, social, historical and psychological. The literature indicated that these areas were likely to provide a comprehensive picture of macro and micro-environmental, as well as individual, variables influencing food choice. The data supported this hypothesis.

The cost of food was an important environmental barrier to choosing healthy food options for women of lower educational attainment. Whilst the women had good access to a large local supermarket, there were problems associated with having small children and no private transport which impacted on the shopping experiences of women with lower educational attainment. The women gave these as reasons why they would not buy heavier items like fruit and vegetables. Women of lower educational attainment were also less likely to be working, which meant they had more

time on their hands at home for unhealthy snacking due to boredom and a sense of feeling trapped. Social factors, in particular support for healthy eating had an impact on diet. The women's ability to make healthy food choices for themselves and their families was influenced by the degree of support they received from their partners and children. Women of lower educational attainment discussed having to tailor mealtimes to the conflicting demands of family members, whilst women of higher educational attainment had more support from family members for their efforts to provide a healthy, balanced diet. Historical factors such as memories of childhood mealtimes and learning to cook, and transition points throughout the women's lives, provide important experiences for successful food provisioning. If women do not believe they have adequate cooking skills, they and their families are likely to be exposed to less varied meals, and they will be unable to pass on skills to their children. These types of negative experiences were more common for women of lower educational attainment, and contributed to them feeling less in control of the food choices for themselves and their families.

Psychological factors, such as well-being or mood are seen as aspects of an individual's affective state which can influence their self-efficacy. Women of lower educational attainment exhibited more negative affect, which could also contribute to lower perceptions of control. Furthermore, an individual needs to believe that a particular action will have an effect on a future outcome if they are to be motivated to change their behaviour. Women of higher educational attainment had more discussions about the diet-health relationship, and its long-term importance to themselves and their families. This meant they were providing more varied and healthy meals. What emerged from the discussions with women of lower educational attainment was the way their expectations for their children differed from their expectations for themselves. However, despite concerns about achieving diet-related healthy outcomes for their children, the food choices the women were making still appeared to be dictated by their lack of perceived control and the various barriers to healthy eating.

The most prominent emergent theme threading through the transcripts was the women's control, or lack of it, over food choices for themselves and their families. It dominated much of the discussion and clearly impacted on the women's ability to make healthy food choices. Women of lower educational attainment appeared to have conceded control to other family members which had a negative impact on their own and their family's diet. It is likely that the other factors identified were affecting these control perceptions.

As the analysis progressed it became clear that Bandura's social cognitive theory (111) could provide a structure to the interpretation of the findings from the focus group discussions. It suggested a mechanism whereby lower educational attainment might result in women having less balanced and varied diets. Self-efficacy is a key construct in the theory, and it is suggested that individuals only feel in control of a situation if they believe they have a degree of self-efficacy, that is the ability to carry out an action (117). The differences in influences on food choices between women of lower and higher educational attainment could account for the differences in their perceptions of control and ultimately the quality of their diet.

Aim 2: To measure the impact of key social and psychological influences on the diets of women of lower and higher educational attainment.

To test social cognitive theory, explore the relative effect of self-efficacy and control, quantify the relationship between social and psychological factors and diet, and meet Aim 2, a survey was undertaken in a sample of women from disadvantaged areas of Southampton. Bandura's model (111) was used to structure the collection, analysis and interpretation of the survey data. Women eating poorer quality diets had lower perceived control over life in general, less social support for healthy eating, fewer positive outcome expectancies and less interest in all aspects of food management for the household. Perceptions of control over life in general were a more significant influence on quality of diet than a general measure of self-efficacy, the central construct in social cognitive theory. Compared to women of lower educational attainment, the impact of these social and psychological influences were much less important for the diets of women with higher educational attainment. Their diets remained significantly better than those of women of lower educational attainment, regardless of their control, food involvement or outcome expectancies. Research has shown that women of lower socioeconomic status who have higher perceived control over their lives, adopt health behaviours that are more similar to women of higher socioeconomic status than other women of lower socioeconomic status who have lower levels of perceived control (210). This demonstrates how important psychological factors are for disadvantaged women, and the potential impact of increasing perceived control in those who do not feel in control over their lives. Research is however lacking on whether it is possible to increase a person's sense of control, and if so, how?

Aim 3: To explore how the findings from phases one and two could be used to inform an intervention to improve the diets of disadvantaged women.

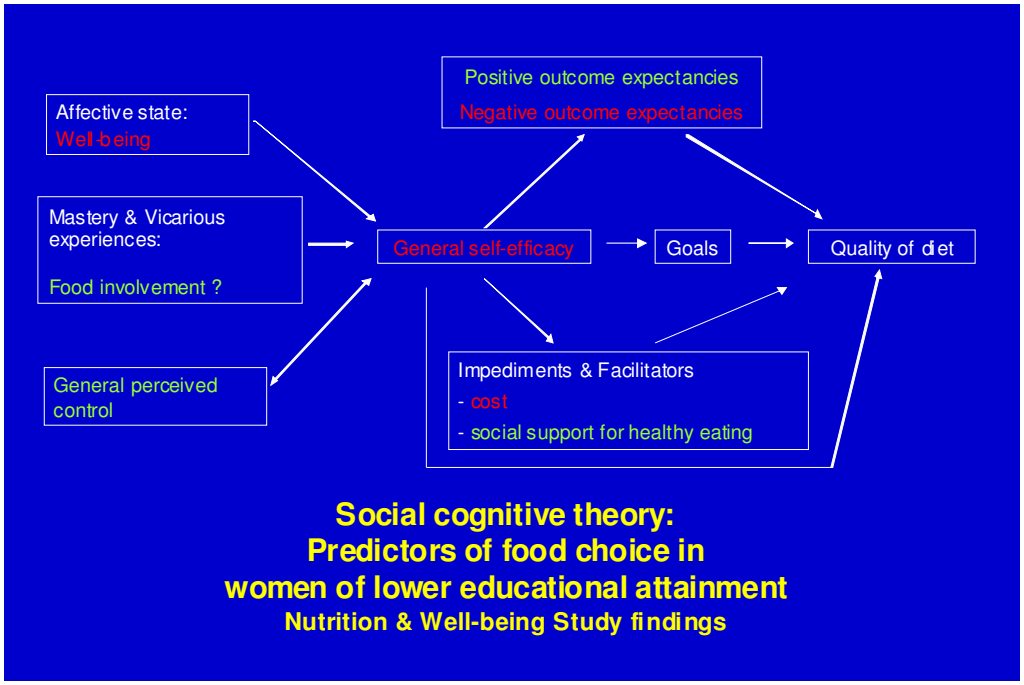
We ran a focus group discussion with practitioners working with Sure Start Children's Centres (SSCCs) to support families with children under five living in Southampton. Presenting the findings from the focus groups and survey work to practitioners enabled us to understand their perspective on how an intervention with disadvantaged families might work. There were three factors they saw as key to successful work with such families: trust, meeting needs and understanding the barriers to change. They highlighted how important it was to gain the trust of families in order to engage them with the activities and services provided for them. Trust was seen to be dependent on a range of factors including having a presence in the community over time; this was symbolised by having a building recognisable to families as a SSCC. It was clear that these practitioners understand a great deal about the lives of the women with whom they work, often living in the same communities and experiencing many of the same barriers to making healthy food choices. This gives them some insight into how to meet their needs and how to support them to make changes. Clearly, interventions to improve the diets of disadvantaged women are more likely to be effective if they are delivered by individuals they trust. The staff are well-placed to engage the women, having built up their trust over many years. This suggests that SSCCs may be the ideal vehicle through which to deliver an intervention to improve the diets of disadvantaged women.

6.2 Why do women of lower educational attainment have less balanced and varied diets than women of higher educational attainment?

Four types of influence on women diets were identified at the outset of this work: environmental, social, historical and psychological. The focus group discussions showed how the impact on food choice of some of these differed for women of lower and higher educational attainment, with the survey work going on to explain their influence on diet in these two populations. Bandura's social cognitive theory (111) was used to interpret and analyse the data from both the focus groups and the questionnaire, and proved a useful way of understanding the interaction between the variables under investigation. It also allowed us to consider the role played by both self-efficacy and perceived control in determining the quality of women's diets. In Chapter 4 the relationships between the variables measured and diet were presented (see Figure 8 below). In brief, social cognitive theory proposes there are four influences on self-efficacy, being mastery and vicarious experiences, affect and social persuasion (111). It is also argued that control is fundamental to any consideration of

self-efficacy (117). In the focus groups we found women of lower educational attainment to have lower perceived control over the food choices for their families. This appeared to be influenced by having had fewer mastery or vicarious experiences, and from having lower well-being. There was no real evidence for the final influencing factor on self-efficacy in Bandura's model – social persuasion. Within the focus group discussions, the women often encouraged fellow focus group participants in their efforts to provide balanced meals for their families. However, they did not mention anyone in their everyday lives who provided such encouragement for them.

Figure 8 Bandura's social cognitive model in relation to significant predictors of food choice in women of lower educational attainment



In green = significant independent predictor of prudent diet

In red = not predictive of prudent diet

Although some of the influences on self-efficacy discriminated between women of lower and higher educational attainment, self-efficacy itself did not appear to substantially differ between the groups. Education is one marker of socioeconomic status, and previous research has found people with higher perceived self-efficacy from low-income neighbourhoods to be eating more fruit and vegetables (40). Whilst levels of self-efficacy varied within the groups of women with lower education, our survey data suggest that perceived control has more of an effect on the quality of their diets.

Our focus group and survey work demonstrated the role of environmental, social, historical and psychological factors in predicting quality of diet. The findings for each of these are now explored in light of the literature and in particular how we have added to our knowledge about what influences the diets of women of lower educational attainment.

6.2.1 Environmental influences

Our interpretation of the data placed perceived control at the centre of the analysis, where Bandura puts self-efficacy in his model (111), with other factors influencing how much control the women perceived they had over the food choices for themselves and their families. A notable influence on the women's perceived control and an important environmental impediment for women of lower educational attainment was the cost of food, as the literature would suggest (65;67). The focus group discussions highlighted profound differences in the priorities and aspirations women of higher and lower educational attainment exercised when buying food, and the strategies adopted by this particular population to cope with a lack of money for food. It was clear from the discussions, that very low income can reduce variety in the diets of women and their families, as has been shown in previous research (17). There is no space for experimenting or exposing children to a variety of novel tastes and foods. We found this to be especially true of fresh fruit and vegetables because women saw them as the most wasteful. Whilst women of lower educational attainment knew they might be paying more for their frozen vegetables than they would for fresh, they believed it was cheaper for them to buy frozen because they were less wasteful. They could take out small portions of frozen vegetables and thus cater for the different tastes and whims of their families. Doing the same with fresh vegetables was more likely to lead to them being uneaten, deteriorating and being thrown away. This was a logical response to shopping on a limited budget for a family who all had different tastes in vegetables. Buying frozen vegetables enabled the women to ensure their families ate a meal that included vegetables, but still conceded control over these particular food choice decisions to their children. Many of the women believed it was the only way they could ensure that their families ate vegetables. In line with previous research (66), another strategy adopted by the women of lower educational attainment was to buy cheap energy-dense foods to fill their families up, and this mirrored some of their own eating experiences from childhood. Our survey findings confirmed that having enough money for food was related to how much control women had over life in general. This is likely to relate to how much control a woman feels she has over the provision of healthy foods to her family.

There was no sense of women not being able to access a large supermarket stocking a range of foods, which some studies have suggested is a problem for vulnerable populations living in more deprived areas (70). Therefore, increasing access to healthier foods would not appear on its own to be the most effective strategy for improving women's diets. However, other aspects of food preparation and shopping were perceived to be barriers to healthy eating, and thus likely to impact on the women's perceived control. Whilst getting to a local supermarket was not a problem, the experience of shopping with small children and being stuck at home all day emerged as particular constraints on eating healthily. All the women of lower educational attainment had young children and most were not working outside the home. This meant they had easy access to food at home, and were sometimes bored which led to frequent snacking. They had a stressful time shopping with their children and getting to and from the shops with their groceries and children all loaded onto buggies. This was one reason why the women did not buy heavier, bulkier items like fresh fruit and vegetables. As further evidence of this, they said good value, home deliveries of such items would encourage them to try and persuade their families to eat them. The focus group discussions gave us increased understanding of the shopping experiences of women with lower educational attainment, suggesting that an intervention to improve their diets needs to acknowledge the environmental constraints that are perceived to limit the foods purchased. If women believe it is harder for them to buy healthier foods for their families, despite the availability of a large, local supermarket, they may feel they are less able to exercise control over this aspect of their lives and may cease in their attempts to do so.

There was some reflection in the focus group discussions of women with lower educational attainment on the importance of time and being able to produce food quickly. There was general agreement that cooking from fresh ingredients was time-consuming, and that using more convenience foods meant children did not have to wait to be fed. The amount of time required for food preparation and eating varies from elaborate home-prepared meals eaten as a social event at a table, to convenient snacks being consumed whilst doing other activities (211). Managing household and childcare responsibilities is often difficult, especially for single parents who often do not have someone with whom to share these responsibilities (211). Many of our women of lower educational attainment will find themselves in this situation. In those circumstances, it is not surprising that women might speed up food preparation and consumption to fit in between other activities, and this can result in eating becoming an activity that is secondary to another activity. People's perceptions about the time available differ and are influenced by demands such as employment, roles, gender and

income (211). However, in the current study, the women of lower educational attainment showed some insight into the contradictory views of their time perceptions; on the one hand talking about having to produce food quickly, and on the other hand talking of being bored at home with time hanging heavily. Little research to date has explored these issues, but what has been undertaken has focused on employed mothers, who described time scarcity in terms of having to fit in work and family commitments (111;211;212). Different timestyles adopted by employed mothers have been defined as active, reactive and spontaneous (212). Those with an active timestyle talked about having to manage and structure their days, and this type of scheduling may be lacking from the unstructured, even chaotic lives our participants experienced. Having either a reactive or spontaneous timestyles were indicative of feelings of low control. Those employed mothers who expressed a dominant spontaneous timestyle, were generally referring to times when they had no deadlines, such as when on holiday (212). These particular circumstances are not relevant for the majority of our women of lower educational attainment, who were not working full-time. However, there was little evidence of women with lower educational attainment planning or organising mealtimes – they appeared to be rather spontaneous affairs in response to the demands of children and partners. Our participants seemed to lack control and with few deadlines, other than school pick-ups, they showed aspects of having a spontaneous timestyle. Nutritional advice typically focuses on what to eat, rather than how to fit those recommendations into daily lives. The focus group discussions have increased our understanding of the complexity of the judgements women make in choosing a range of foods for growing families. Perceptions of time scarcity in women of lower educational attainment appear to relate to a lack of planning and organisation, leading them to feel more out of control and in turn to be eating poorer quality diets.

Reflecting on all these environmental impediments to eating healthily, clearly it is not enough to just consider the issues of cost, access and time in isolation. The total experience of food shopping, preparation and eating within the context of women's daily lives needs closer attention if women are to be supported in providing healthier meals.

6.2.2 Social influences

Social support is an important facilitator for changing behaviour, and is fundamental to any discussion of control and self-efficacy (117). Strong associations are seen between social support and health outcomes, particularly psychological well-being. A

large literature documents lower risk for depression and psychological distress for those who enjoy greater social support (213).

There are mixed findings on the impact of social support for healthy eating. One study found no evidence that social support acted as a moderator between income and food insecurity (214), suggesting that drawing on social resources did not help those on low income to manage their food provisioning more successfully. Another study using a social interaction approach to their intervention was effective in increasing fruit and vegetable intake (215). This reinforces the value of facilitated group support as a positive influence on food choices. Furthermore, whilst there were reported changes in consumption, there were no significant changes in knowledge, suggesting that this kind of group intervention contributes to behaviour change without requiring specific knowledge gain.

Social relationships have been found to be important influences on how food choices fluctuate over time (90). Our survey found that the women's ability to make healthy food choices for themselves and their families, was influenced by the degree of perceived support for healthy eating forthcoming from their partners and children. Women of lower educational attainment talked a great deal about the problems they had due to a lack of support from within their households, and having to tailor mealtimes to the often conflicting demands of other family members. Research has shown that women often have to put health considerations aside when they conflict with the desires of others in the household (82). This enables them to maintain social relationships and thus have pleasant mealtimes. In the current study, these issues were mentioned frequently by women of lower educational attainment, and perhaps reflected their lack of control over the food choices within the household. It is important to understand the priority given to different food-related values by women of lower educational attainment, in order to know how to support them in improving the quality of their diets. Managing relationships was clearly an important value, as was the cost of food, and the taste preferences of themselves and their families. These values took priority over health considerations, suggesting that an intervention promoting the health benefits of a nutritionally balanced diet is unlikely to be effective, without addressing social influences.

There was little discussion from the women of lower educational attainment about partners sharing responsibility for the food shopping and preparation. This, along with having young children, has been shown to be related to maternal dissatisfaction with

their food management (82). In the current study all the women of lower educational attainment had young children. Having less family support has been shown to be related to women skipping meals or providing less nutritious meals (82). Discussions with the women of lower educational attainment contained evidence of these types of eating patterns. Women are often the ones doing the shopping and food preparation, but it is the men and children in the home who influence the food choices made, providing more or less support for decisions the women would like to make (216). This was certainly the case for the women of lower educational attainment. The survey confirmed that women of higher educational attainment were receiving more support for healthy eating from friends and family. This inevitably made it easier for them to provide healthy meals for their families.

In contrast, women with lower educational attainment often had partners with eating habits that established routines that might be hard to change within their households. Research has highlighted the dilemma women face when family members dictate what they will or will not eat, as it impacts on the quality of the woman's diet too (90). The decision-making process in families is complex and for women of lower educational attainment, decisions about food were clearly affected by the food values, preferences and expectations of their partners and children; this was generally a negative influence unlike the experiences of women of higher educational attainment. In the focus group discussions women of lower educational attainment spoke a great deal about the struggles they had with partners and children who refused to eat a range of foods. These women appeared to lack the parenting skills required to negotiate with their families and reduce the conflicts that clearly arose in relation to mealtimes. Family patterns of eating will impact on the diets of the whole family. Even when women of lower educational attainment expressed an interest in eating a more healthy and varied diet, their lack of resources and reduced sense of control meant they often gave up on their own aspirations in favour of conceding the food choices to family members, and then sharing the ensuing meals.

6.2.3 Historical influences

Research has shown that women who lacked cooking skills, perhaps due to not learning to cook when they were younger, were eating fewer vegetables than they would like (90). It is likely that a lack of knowledge about food, together with a failure to develop the appropriate skills needed for feelings of mastery, is likely to have a negative impact on the woman's perceived control, and hence her own and her family's diet. If she has not had past successes in preparing a range of healthy foods, she is

unlikely to attempt to provide those for her family, which may increase her sense that she is not in control of the situation. Our focus group discussions suggested that women of higher educational attainment had more positive experiences of cooking and learning to cook, and thus showed more control generally for feeding their families a healthy, balanced diet. This demonstrates how crucial mastery and vicarious experiences from across the lifecourse can be.

Research suggests that childhood memories of cooking remain throughout adulthood as reference points as to how food should look and taste (97). It is known that women who report enjoying childhood activities and rituals that include fruit and vegetables, and having pleasurable memories of the taste of these, are more likely to include them in their diet as an adult (90). We found that women of lower and higher educational attainment tended to have had different vicarious experiences in relation to all aspects of food. The focus group discussions found that women with lower educational attainment had fewer positive role models to provide them with the opportunities to observe and learn the skills they required for effectively managing food choices for their families. If their mothers, being the main models for food provision, were limited in their own skills and experiences, women in the current study were unlikely to be confident in their own skills. If important role models are not observed preparing, cooking and eating a variety of foods it is likely to lead to a lack of exposure to, and hence knowledge about, a variety of foods. Foods that are untasted or disliked in childhood are not incorporated into personal food systems, so remain unacceptable and uneaten later in life (90). This could lead to women feeling less confident when choosing food. From the focus group discussions it appears that women of lower educational attainment did generally have more negative memories of the role of food in their childhood, and limited exposures to different foods to draw upon for feeding themselves and their families today. We can speculate that this leads to a pattern of eating that may persist as they continue to eat limited diets in adulthood, maintaining a food choice trajectory containing little variety and ultimately limiting the food experiences of their children (90;98). Women's food choice trajectories clearly interact with their current psychosocial characteristics to predict a pattern of eating, that could not be explained by current social and psychological factors alone.

Lifecourse transitions, whether it is moving away from home to live as a single adult, moving in with a partner, or becoming pregnant and having children, have an impact on diet. Focus group participants in both educational attainment groups expressed some negative and positive dietary outcomes related to changes in living circumstances. There is evidence that eating habits can change when any family transitions happen,

whether it be a child or parent moving in, or when a woman marries (90). Living with different people would expose a woman to a new range of skills and activities, which may provide her with positive or negative vicarious experiences. Previous research found that the move away from home broadened participants' eating experiences (217). In the current study, women of higher educational attainment left home to become students, and those of lower educational attainment tended to leave home to take up work, but the experiences of sharing mealtime experiences with different people, had an impact on their diets. Clearly these transitions provided more positive food-related experiences for women of higher educational attainment, leading them to eat a more balanced a varied diet with their families.

Having children is one important transition and this might make women more concerned about improving their diets for the sake of their children. The transition to motherhood might leave women more open to improving the quality of their diets, as their focus shifts to considering the health of their child. For some women of lower educational attainment, it appears to be the first time they have thought about the relationship between diet and health. Being pregnant prompted some to make improvements to their diets. This could be due to health care professionals making women more aware of how their own actions would affect a pertinent outcome for them: hence eating well would lead to a healthy baby and a healthy mother to care for it. Research suggests pregnancy may be a time when health and nutrition become more relevant to women; but it is also the case that disadvantaged women are still less likely to make healthy food choices (106). Our analysis shows that for women of lower educational attainment, social and psychological factors play an important role in determining the quality of their diets. These factors do not appear to be so crucial for those with higher educational attainment. Differences in these factors could explain why some women of lower educational attainment may be receptive to healthy eating recommendations during pregnancy, whilst others find it hard to make improvements. In contrast to the general ambivalence about the link between nutrition and future health for themselves, some women talked about how their diets had improved now that they had moved from snacking to eating a shared meal with their children. Becoming a mother raises the priority for good health – at least for their children if not for themselves – so may be a key time to intervene to improve diet. Our focus group participants talked of their role as mothers being to raise their children to be as healthy as they could, but often they did not apply the same reasoning to themselves. Furthermore, once their children start to grow up and have their say about what they will and will not eat, some of these women of lower educational attainment seemed to lose control over the food choices for themselves and their family. Our focus group

discussions highlighted a range of factors that inhibit attempts to eat more healthily, but suggests that new mothers might be particularly receptive to an intervention to improve their diets.

6.2.4 Psychological influences

Control emerged as a prominent theme from the focus group discussions – more dominant than Bandura's central construct of self-efficacy (111). Most research supports the view that a strong belief in personal control is generally advantageous in relation to physical and psychological health outcomes (117). An earlier analysis of the questionnaire data showed that lower educational attainment is associated with lower levels of perceived control and that both are independently associated with poorer quality diet in Southampton women (183). The findings suggested that the level of perceived control over life is a more important predictor of the quality of diet in women of lower educational attainment than those of higher educational attainment. Previous research has found that perceived control was an important predictor of health status for lower social class groups, whereas in higher social class groups, health and well-being were generally high and showed less variation as a function of level of control (210). Findings from the focus group discussions and supported by the survey data, confirmed that women of higher educational attainment were more in control and able to find the necessary energy and resources to achieve their aim of providing their whole family with a varied and balanced range of foods, suggestive of internal locus of control. This meant taking personal responsibility for ensuring every family member was eating a healthy diet. Previous research has found higher educational attainment to be associated with lower chance health locus of control beliefs (40); thus these individuals have a less fatalistic view of their own (and their family's) future health outcomes, so are more likely to take personal responsibility for ensuring their health. We now know that for a woman of lower educational attainment, feeling less in control has a measurable impact on the quality of her own and her family's diet. Maintaining control may be an illusory goal because of the challenging environments experienced by women of lower educational attainment, which can be unpredictable or inflexible (212).

There are two ways that a sense of control might be important for health, and diet in particular. The first is through diet-related behaviours, in that people who believe themselves to be in control of their lives are more informed about health issues and more likely to take measures to protect their health, including eating a better quality diet, than those with less perceived control over their lives (135). The second way in

which perceived control is believed to influence health is through the direct effect of feeling out of control and demoralised, which suppresses the immune system raising the likelihood of disease and infection (137). We can speculate that people in poorer health might have less energy to interest themselves in food, or for tackling the conflict our focus group discussions suggest food choice can cause within the household.

As well as physical well-being, emotional well-being is likely to impact on diet. Previous research found low self-esteem – one aspect of emotional well-being – to be accompanied by low levels of perceived personal control, and suggested that improving an individual's sense of control may have a positive impact on their self-esteem (117). Whilst well-being did not have an independent effect on diet in our survey data, women of lower educational attainment did have lower levels of well-being than those with higher educational attainment, and lower well-being was related to lower perceptions of control. This new insight into the relationship between well-being, control and diet, highlights the need to address a woman's emotional well-being in an intervention to improve her food choices. Interestingly, this was one of the few psychological factors also related to quality of diet in women of higher educational attainment. Along with social support it was the only factor to have an independent effect on their quality of diet. Something about the environmental circumstances of women with higher educational attainment enables them to eat better quality diets even if they do not feel in control of their lives. However, if they have low levels of well-being and lack support for healthy eating, their diets appear to suffer.

Having a belief that a current behaviour will impact on a future outcome is included as outcome expectancies in social cognitive theory (111), and is seen to be an important precursor for adopting positive health behaviours. Analysis of the survey data showed a direct independent effect of positive outcome expectancies on quality of diet. Positive outcome expectancies are the beliefs that good things will come out of current actions. This again was only the case for women of lower educational attainment. This finding fits with the conclusion that personal or psychological factors are more influential in determining quality of diet in women of lower rather than higher educational attainment. Some women of lower educational attainment were aware of the nutritional advantage a healthy diet gives them, but as many did not appear to consider their own health to be a very high priority, this is unlikely to motivate them to eat a healthy diet. The fact that we found no effect of negative outcomes expectancies on healthy eating behaviour suggests that believing in the benefits of adopting a healthy diet is more important to this group of women than concern about negative consequences. Proximal positive outcomes related to diet, such as losing weight or

being more energised may be more pertinent than negative distal outcomes such as the risk of developing a range of chronic conditions. Earlier research suggested that disadvantaged populations were less likely to be concerned about events and negative health outcomes in the future (66).

This lack of future salience in women of lower educational attainment meant they were more likely to express ambivalent views on the benefits of a healthy diet. This lowered their expectations of what they could achieve by changing their food choices. Previous research has highlighted how a lack of understanding of the link between diet and disease can lead to a lack of motivation to eat healthily (66). Whilst the focus group discussions with women of lower educational attainment revealed their knowledge of recommended dietary guidelines, such as eating five portions of fruit and vegetables a day, some did not see this as a priority for themselves or even consider it feasible. This is in line with previous research that found women with lower educational attainment believed less in the value of fruit and vegetable consumption as a means to good health (40). This contrasted with women of higher educational attainment who did choose healthy foods for themselves and their families, frequently stating the health benefits of this. Research has shown that women with higher educational levels have a better understanding of how good nutrition affects their long-term health (121). For the women of lower educational attainment, the main reason for changing to a more healthy diet was to lose weight – here they had a clearly-expressed outcome expectation. Otherwise, they tended not to expend energy on the effort it took for them to plan and eat a different, more varied diet. We may or may not be able to change people's outcome expectancies; if we can, stressing weight loss rather than long-term health may be a more successful approach for improving the diets of women with lower educational attainment.

We introduced the construct of food involvement into our hypothetical model otherwise built around constructs from Bandura's social cognitive theory (111). Food involvement is defined as *"the level of importance of food in a person's life"* (192)p236. Using the Food Involvement Scale (192), we had previously shown a woman's level of food involvement to be a strong, independent predictor of the quality of her diet (182). We also found that women of lower educational attainment had significantly lower food involvement. However, we were unsure of the relationship between this and the psychological constructs specified by social cognitive theory. Analysis of the survey data found that food involvement independently predicted a prudent diet in women of lower educational attainment. This is an indication that giving food preparation and consumption a high priority is important in determining the quality of disadvantaged

women's diets. The barriers to eating a range of foods as previously described (cost, access, social support) may all reduce a woman's enjoyment in choosing, preparing and eating food and hence lead her to have lower involvement with food. One aim of an intervention to improve quality of diet, might be to increase women's interest and enjoyment in these areas of food provision.

The analysis of the survey data demonstrates the interplay of a number of psychological and social factors that affect the quality of diets in women of lower educational attainment. The implication of these findings is that for women of lower educational attainment, having a lower sense of control over life, less support for healthy eating, less involvement with food, plus a belief that there are few benefits to health of eating well, results in a poorer quality diet. This is not the case for women of higher educational attainment. This suggests that personal, psychological factors are more important in determining dietary quality in women of lower educational attainment than in women of higher educational attainment. It may be that there are environmental factors which somehow protect the diets of women of higher educational attainment even when they feel they lack control over their lives. We have no data on such things, but imagine that women of higher educational attainment are likely to be living in better circumstances and be surrounded by fewer opportunities to eat poor quality food. Support for this conclusion comes from studies of geographical distribution of fast food outlets. For example research has found there to be more McDonald's restaurants per head of population in deprived neighbourhoods of Scotland and England, with the number increasing linearly with increasing levels of deprivation (218). Whilst the behaviour of individuals cannot be determined by examining area-level statistics, the implication is that women living in deprived areas may be faced with more opportunities to eat cheap, takeaway food. Faced with these kinds of environmental challenges, women of lower educational attainment who tend to live in these areas may have to have a higher personal sense of control and believe more strongly in the benefits of healthy eating than women of higher educational attainment in order to maintain a good quality diet. Research has shown that disadvantaged people with high perceived control are more like their higher social class counterparts than others in their own income group (210). Thus control beliefs appear to serve as a buffer for the negative consequences of low social class in regard to health and well-being.

6.2.5 Summary

The findings from the focus group discussions and survey work have implications for the design of an intervention to improve the diets of women with lower educational attainment. They pinpoint a number of social and psychological factors we would have to address. We would need to improve women's perceived general control, level of food involvement, their belief that healthy eating would have beneficial outcomes and social support for healthy eating if we are to improve the quality of their diets. How might these goals be achieved? This question is considered later in this chapter (6.4).

Applying a theoretical model to the interpretation and analysis of the data from the focus groups and survey work, enabled a synthesis of the influence of psychological and social factors on women's food choices – particularly those with lower educational attainment. Women who have less confidence in their cooking skills, less money for food or time for cooking, less support from family for eating healthily, or ambiguous beliefs about the benefits of a varied and balanced diet, may feel they have less control over their own and their families' diets. This new understanding from the focus group discussions about how these social and psychological factors interact to influence food choices, provides the kind of knowledge needed if an effective intervention is to be developed to improve the diets of disadvantaged women and their families. Furthermore, the new understanding about interactions between these micro and macro-environmental influences on the diets of women of lower educational attainment is important for developing an intervention to meet the health targets set by Governments and international health organisations. Insights gained into some of the environmental constraints that prevent disadvantaged women eating a better quality diet, whilst difficult to address, can be acknowledged as potential barriers in an intervention, and thought given as to how to support women to overcome them.

6.3 Limitations

Cross-sectional data can only give a snapshot of people's lives. Whilst we can interpret the findings from the survey using Bandura's social cognitive theory (111), we cannot say that the relationships identified are causal. We can speculate that lower feelings of control are influenced by a lack of social support for healthy eating, a lack of involvement or interest in food generally and less belief in the value of a good diet for future health. We can speculate further that these factors will lead to the adoption of a poorer quality diet, especially for women of lower educational attainment. However, we cannot prove this to be the case from the findings presented in this thesis. To test the

model we would need to conduct a longitudinal study to identify cause and effect. No claim is made within this thesis that Bandura's social cognitive theory has been tested in this way. Rather we have pragmatically utilised aspects of the theory to interpret our findings, inform the development of the questionnaire and guide us in our thinking about an intervention to improve the food choices of women with lower educational attainment.

The researcher's role in the process of producing, analysing and interpreting the data is a key challenge in qualitative research. By adopting a non-authorative, unassuming and non-threatening disposition, I feel I was able to put the focus group participants at their ease. This may have been beneficial in gaining a better insight into the lived experiences of the respondents, but my prior experiences or expectations can inevitably shape or even bias the findings. The research process is never neutral, particularly in qualitative enquiry where the researcher is a substantial part of the process and directly influences the production of knowledge. However, these issues were considered throughout the research and by adopting a rigorous approach to the data analysis and interpretation, attempts have been made to minimise any personal influence. Focus group findings and our interpretation were presented back to participants and others with similar roles in the city, and were acknowledged as a plausible interpretation of the data.

With this hard-to-reach population we have to rely on individuals volunteering to come to focus groups or complete questionnaires with us. This introduces a bias inherent in this type of research. However, this not only gave us insight into the lives of those prepared to engage with the research process, but also highlighted the difficulties in working with this population. This has important implications for future intervention work.

With hindsight, there are other methods that could have been adopted to answer our research question. Self-report data can show the perspectives of participants, but does not capture what might really be happening. Observation work or case studies can provide richer data about people's lives. Individual or group interviews could also have been used to explore women's experiences with food. Individual interviews can encourage individuals to be more open, as they are only sharing their views with the researcher rather than in a group setting. However, the advantages of utilising the dynamic aspects of focus group research have been highlighted in Chapter 3 (3.1.1.1).

The expert focus group discussion did not provide the insights initially sought by the research team. We were interested in the practitioners' views on how we could take our findings from the earlier focus group and survey work and translate them into practice. Women's perceived control over life, their social support for eating healthily, food involvement and positive outcome expectancies were all related to quality of diet. An intervention to improve the quality of women's diets will need to address these issues. To increase the chances of an intervention being effective, we wanted to gauge the experts' views on how this could be achieved. Despite prompting the discussion failed to travel down this path to explore the psychological and social factors influencing quality of diet. Instead we learnt a great deal about how staff work with disadvantaged populations to build relationships and trust. They demonstrated their understanding of the women's lives and needs. So we gained insight into other aspects of their work which will also be important in developing an intervention.

6.4 How can we use this knowledge to develop an intervention to improve the diets of women of lower educational attainment?

6.4.1 Four factors to address

As a consequence of this research, we now know that key influences on the quality of diets of women of lower educational attainment are: having less perceived control over their lives; lacking social support for eating healthily; having lower expectations of positive outcomes from healthy eating; and giving food a lower priority in their lives. The focus group discussions suggested that women's sense of control might be affected by the perceived cost of healthy food, stressful shopping experiences, time scarcity, a lack of cooking skills and limited food preferences due to more negative experiences in their past and emotional well-being. This research has synthesised this knowledge in a way that has not been done before.

Whilst influences on food choice include demographic factors that are largely unmodifiable, such as gender, age and SES, this research has identified a range of environmental, social, historical and psychological factors that further hinder individuals from using their knowledge about healthy eating to improve their diets. This new understanding of the beliefs women of lower educational attainment have about food-related experiences can be used to support them to change their food-related behaviour in order to improve their diets. In an ideal world we might attempt to address all these influences, but realistically we need to consider which ones we might be able to modify. Issues to do with self-efficacy and perceived control are central to our

interpretation of the data and to major theories of behaviour, like social cognitive theory (111). Since in our interpretation many of the other factors influencing food choices act through a woman's self-efficacy and perceptions of control, this highlights these factors as key areas for an intervention to address.

There is little evidence showing how to change people's perceptions of control. This area is very under-researched. Perceived control can be viewed as a stable personality trait, meaning it would not be a malleable construct. Or it could be argued that it is dependent on an individual's perception of their current situation, so this could be addressed by changing aspects of their immediate environment. This could be by way of initiatives that would improve mastery experiences, such as gaining cooking skills. There is more evidence of the effectiveness of interventions designed to increase self-efficacy. For example, one intervention that specifically targeted self-efficacy for eating fruit and vegetables lead to increases in fruit and vegetable consumption (81). In the low-income population at one year follow-up, behavioural counselling was shown to be more effective than brief nutrition education in increasing fruit and vegetable consumption. However, these increases were not predicted by levels of self-efficacy measured at baseline, but by the degree of change participants recorded in self-efficacy over the 8-week period of the intervention. These findings suggest that change in self-efficacy preceded the increase in fruit and vegetable consumption, and that the first is a necessary condition for the second. Measures of perceived control over life could reflect the same pattern of change in an intervention intended to improve the self-efficacy of women of lower educational attainment. We may therefore need to find ways to increase women's general self-efficacy, which would in turn increase their sense of control. How this might be achieved is explored later in this chapter (6.4.2).

The environments in which people live are complex and have a marked effect on their behaviour and food choices. Individuals interact in a variety of micro-environments, such as schools, workplaces, homes, restaurants, and these are influenced by broader macro-environments such as the food industry, Government and societal attitudes. In the UK most food is eaten within the home. A recent study suggests that food choice processes are renegotiated and reproduced over life-stages; so health and nutrition may play a greater role in families with children, with parents attempting to model healthy eating to their children (219). The authors argue that to encourage individuals and couples towards a positive dietary change, interventions should focus on the motivating and enabling factors relevant to the couple. This involves understanding how food decisions are made, to what extent each partner influences their own and

their partner's food choices and the healthy eating values of all family members. In other research, participants were asked "What is the single most important thing that you could do, or that could be done, to make it easier for you to eat a healthy diet?" The most popular responses in decreasing order were reported to be: having more time to prepare healthy food; having more fresh/healthy food in the house; having tasty/healthier food alternatives available; greater motivation and self-control; being able to limit sugary snacks; and eat more fruit and vegetables (220). These findings clearly demonstrate the need to develop interventions that can address multiple influences on food choice, rather than concentrating on changing one factor alone.

If no account is taken of the context of food choice and eating events, it is not surprising that interventions are unsuccessful (221). Our focus group discussions showed that family dynamics appeared to have an important influence on food choices, and our survey work showed that those lacking social support for healthy eating were eating poorer quality diets. There is therefore a good argument for using a family-based intervention to elicit family support in order to encourage change. To improve the quality of women's diets, our findings indicate we would need to not only increase their level of social support for healthy eating, but also their food involvement and their belief that healthy eating would benefit them. It appears that if women are not interested in food and cooking, this will have a negative impact on their own and their families' diets. We can speculate that a woman's feelings of low self-efficacy and control feed into a sense of incompetence in handling and preparing food as they do in other areas of life. This lack of confidence in food preparation may engender lack of interest and lead women to give food a lower priority, which in turn reduces quality of diet. Food involvement could be seen as an indicator of mastery and vicarious experiences, which are expected to impact on self-efficacy. Hence each factor is influencing the other in a negative loop until one or the other is addressed. There are hints from the literature that food involvement and a belief in the benefits of healthy eating could be addressed by cooking skills and nutrition education courses (202). Healthy eating campaigns can have an impact on awareness, knowledge and intention to change, hence the plethora of community-based interventions to improve dietary patterns and reduce related risk factors. However, behaviour rarely changes, particularly in those with lower SES and lower educational attainment (222;223). Over the years, there is growing evidence that nutrition education alone is unlikely to achieve sufficient dietary change to improve public health in the population. It is particularly ineffective with lower socio-economic groups, unless, it is argued, combined with interventions designed to increase social support (207). However, there is less precedent for interventions specifically designed to increase social support for healthy

eating. Despite stressing the importance of social support for change in health behaviours, Bandura acknowledges that interventions to create social structures to support change are mounted rarely, because *'they are troublesome to create and their management requires attention to the mundane hassles of everyday life' p264* (114). Maybe as a consequence of this difficulty, the most common attempt to provide social support to those trying to improve their diet is to offer them peer-led support.

A recent King's Fund systematic review examined the content and effectiveness of interventions targeted at changing health behaviours, including diet and physical activity in low-income groups (224;225). The review highlighted the lack of good quality research in this area. Based on the studies identified in the review authors concluded that providing information on health behaviours, together with goal setting may be effective in changing health behaviour in low-income groups. Consistent with these findings, a recent review of systematic reviews of interventions directed at changing health behaviours, including diet, highlighted four aspects of intervention design that were effective in bringing about change (226). These were the use of an educational component; provision of on-going support after the initial intervention; social support from peers or lay health workers; and family involvement with the intervention. To be effective in bringing about change, the authors suggest there should be clear explanations of the risks of the behaviour and the benefits of change, and use of behavioural strategies such as goal-setting and self-monitoring to support and empower women. On-going support needed to be more than just a couple of contacts and over a period of months rather than weeks. Like the King's Fund systematic review (224), this review also highlighted the lack of evidence relating to interventions that might bring about dietary behaviour change in women of child-bearing age. Whilst these reviews highlight the importance of providing information and explanations, it is argued that knowledge is not a sufficient factor in itself for dietary behaviour change (227). It is suggested that it may be more salient when integrated into behavioural programmes targeting dietary behaviour change using established psychological principles.

The model of a peer-delivered intervention is the basis for the introduction of 'health trainers' across the UK (228), who are recruited from the communities they serve to support individuals to change lifestyle behaviours. Another model is suggested by Sure Start Children's Centres (SSCCs). As stated previously, they provide a range of support services to disadvantaged and low-income families, with the express purpose of enhancing the health and development of children under five years, and so preventing the transmission of inequalities in health, poverty and social exclusion (204).

One of the ways they attempt to do this is through employing parents from the local community to work in the centres, providing support to other parents. To date, there is no information on the impact of SSCCs on the diets of the families who use them. They have however been shown to improve parenting and social development in children (201).

In the final phase of this research project, the expert focus group discussions highlighted the importance of staff forming relationships with the families with whom they work. Practitioners believe these relationships develop over time, with a permanent central building perceived as an important focal point of the services provided. It is only once families believe in the permanence and stability of Sure Start that they begin to trust in the services and staff providing them. What became clear from this focus group is the level of enthusiasm from the staff themselves for making a difference. They are aware of the challenges they face every day in reaching the most disadvantaged families. As many of the staff come from and live within the communities they serve, they experience many of the same impediments to eating healthily. They therefore have invaluable insight into the lives of the families they serve. They spend a great deal of time and energy thinking about different ways of working and developing a range of activities in order to meet the needs of as many people as possible. They spoke of the necessity for evaluation and personal feedback, and were keen to share examples of good practice. This kind of open-mindedness and desire to make a difference bodes well for any intervention we develop for delivery through SSCCs, as staff appear to be open to new ideas if they think it will make them more effective practitioners. There is a good rationale for training SSCC staff to deliver an intervention to improve the diets of disadvantaged women. The expert focus group discussions demonstrated that SSCC staff are the right people to support behaviour change, having gained the trust of parents in the city by building good relationships with them. They have regular contact with parents so can find many opportunities to engage with them. They want to help families lead healthier lives, and an overriding philosophy of SSCC is to focus on reducing health inequalities in its widest sense. Furthermore, the literature suggests that the use of peer or lay workers improves the reach into the community, and that peer-led interventions are more likely to be effective.

The most vulnerable groups who are the most in need of change, are the hardest to reach and engage in behaviour change initiatives (229). It is clear from previous research that recruiting and retaining sufficient numbers of participants for community-based trials is challenging (202). The expert focus group discussion supports our belief

that it is the community practitioners who can help with this endeavour, as they have already established relationships with members of our target population. Previous research has shown that involving what are termed as “non-professional” or “non-specialist” staff in helping to deliver aspects of interventions, can be successful (207). It increased the reach of services and received positive feedback from clients, many of whom reported changes in food-related activities. There is a growing trend to employ lay people to assist professionals in undertaking some of the semi or unskilled aspects of their work. This emerging discipline, involving lay workers within the NHS and community, includes lay food and health workers (LFHWs) (207;230). The role of LFHWs is seen as educating individuals in basic healthy eating messages, generally within projects with a biomedical or clinical agenda relating to prevention of specific diseases, such a coronary heart disease. This approach could be seen as merely an extension of the traditional professional role, with an emphasis on changing individual behaviour, and arguably is only partially effective in bringing about meaningful change. Although many practitioners are now engaged in these types of activities, few have the time or resources to properly research or evaluate their work. However, the ability of LFHWs to contact the hard-to-reach when other professionals may have failed, is seen as a positive side of their involvement in health promotion. Lay helpers are perceived as a source of credible, culturally-appropriate advice on health behaviours. Their familiarity with local cultures and communities is central to their unique ability to reach and mobilise disadvantaged populations (207). Most have lower educational attainment themselves, and thus share many of the same social and environmental backgrounds as the communities they serve, and this is seen as fundamental in bridging socio-cultural differences or other barriers to improve access to health services for the hard-to-reach (207). It is suggested that many professionals doubt their own ability to address the more complex issues of working in socially disadvantaged communities, resulting in some scepticism and disillusionment. It is not surprising therefore that they are receptive towards lay helping (207). Other research looking at the role of “peer educators” suggests pros and cons of this approach (231). They can make valuable contributions to the programme design, deliver interventions effectively and provide social support to each other as well as participants. However, this requires intensive training, support and monitoring to ensure complete and accurate data collection, and complete and consistent programme delivery.

There is a lack of validated, objective outcome measures for many interventions, and individuals suffering the most deprivation are often under-represented in interventions and trials, or have higher drop-out rates. The challenge is to interest people in change if long-term health is not their top priority, as we know from our work it may not be; they

may be uninterested unless motivated by immediate or chronic health conditions, or a cosmetic reason, such as weight loss. To counteract any cynicism or negativity in response to nutrition messages, it is important to acknowledge individuals' taste preferences (232) and design initiatives to maintain and increase their enjoyment of food (58). Tailored approaches may be more successful, with different approaches for disadvantaged and hard-to-reach groups, and for different aspects of diet (128). The next step is to design an intervention that can fit into the daily work routine of busy SSCC staff. It needs to help them support disadvantaged women to feel more in control of their lives, and specifically more in control of the food choices they make for themselves and their families.

6.4.2 Practical implications

This research potentially provides some sound guiding principles for any practitioner wanting to intervene to improve the diets of women with lower educational attainment. It is suggested that self-efficacy is a prerequisite for a sense of control, and experience of exercising control builds up a sense of self-efficacy (140). In this case, it would describe a woman's belief that she was able to feed herself and her family a healthy diet, based on her knowledge of healthy eating and her confidence and skill in preparing healthy food.

Building self-efficacy and giving control over their condition back to patients are the cornerstones of the Department of Health's Expert Patient Programme (233). This is a self-management intervention programme intended to provide knowledge and skills to empower patients to manage their own conditions. In the Expert Patient Programme, patients become key decision-makers in the treatment process and gain control over their lives through improved confidence, resourcefulness and self-efficacy. Much of this is achieved through group work. The programme is based on Kate Lorig's pioneering work in the US, developing self-management courses for patients with chronic health conditions (234). Evaluation of self-management programs has shown them to be more effective than standard patient education in improving clinical outcomes and enhancing physical and psychological well-being in chronic conditions such as arthritis and asthma (235). It is proposed that such programmes are effective because they increase patients' self-efficacy (234;236).

The work on self-management suggests that giving patients control of their condition is key to improving outcomes. In recent years, this principle of 'empowering' the patient has also been applied to the support of patients newly diagnosed with diabetes.

Professionals who run support programmes for this patient group have suggested that the process of empowerment demands a very different style of group work than the process of education which it is replacing (237). The authors argue that health care professionals have to accept that *"people with diabetes are completely responsible for their condition and that this responsibility is non-negotiable"* (238) p75. To empower these patients to manage their own illness they need to be supported in defining and achieving their own rather than the professional's goals. In practice, this means encouraging patients to reflect, problem-solve and set goals, and to use the group for support and encouragement. The success of this type of group work is reflected in changes in self-management behaviour of newly diagnosed diabetics, including improved quality of diet, and in reductions in body mass and total cholesterol (239).

The skills of reflection, problem solving and goal setting, key to this approach, are all recognised behaviour change techniques known to encourage self-efficacy (240). Embedding training in these skills in self-management programmes for people with chronic disease has been shown to be successful in improving health behaviours. The current project raises the question, could this model be adopted to apply to a non-clinical population: women of lower educational attainment? The idea would be to design an intervention to increase disadvantaged young women's sense of self-efficacy and control, both general and specific to health behaviours, and would do this by increasing the self-efficacy and behaviour change skills of staff who work with these women. The rationale behind this is that the majority of activities aimed at improving the diets of young women living in disadvantaged areas of Southampton are delivered by Sure Start Children's Centres. Mapping and observation of these activities found examples of approaches that research suggests might be effective in changing health behaviours (our unpublished data). However, few of these activities were being evaluated and it was clear that many opportunities to address issues with diet were being missed. Observers of these activities used Abraham and Michie's taxonomy of behaviour change techniques to classify what was already being done to support women change their diet and physical activity behaviour (241). Though they found staff to be highly motivated and skilled at engaging the women, the observers also found staff to be largely unaware of what might be most effective in bringing about behaviour change and that there was rarely discussion of current healthy eating recommendations with women taking part in these activities. As a consequence, the observers concluded that: there was potential to introduce SSCC staff to a range of techniques proven to be effective in motivating, encouraging and sustaining positive behaviour change; they could benefit from learning strategies for discussing and encouraging problem-solving on issues to do with healthy eating recommendations;

and supporting staff to reflect on what is being delivered, why and how it might make a difference would be a useful starting point.

These observations on current practice within SSCCs, evidence of the barriers to health behaviour change among women in the intervention areas, and the insights provided by practitioners in Southampton could all inform the development of a training intervention.

6.4.3 Conclusions

Developing interventions to increase the uptake of healthy behaviours and reduce the prevalence of unhealthy behaviours is a key priority for the UK Government (49). In everyday practice the responsibility of developing these interventions falls to health promotion professionals. As the evaluation and cost-effectiveness of such programmes become increasingly important, it is vital that interventions are based on sound theoretical frameworks (242). As noted earlier in Chapter 2 (2.2), health psychologists have been exploring how and why people adopt health-promoting and health-compromising behaviours, and what predicts changes in these behaviours. They have suggested and tested a number of social cognitive models of behaviour change on a variety of behaviours. Whilst these tend to have low predictability, not understanding the relationship between psychological and social mediating factors and behavioural outcomes limits the effectiveness of nutrition interventions (156). It has long been recognised that only a few health promotion activities at a local level are effective, and evidence from well-designed public health studies is seldom put into practice. However, health psychologists have extensive research-based knowledge to offer which can contribute to policy development, designing health need assessments and designing, monitoring and evaluating theoretically-driven and evidence-based interventions at an individual, family and community level. It is argued that a mechanism to make best use of this psychological expertise is lacking (243). It is clear that disadvantaged women must be targeted in interventions to improve their health outcomes and those of their children. Working to improve the diet and nutrition in this population will be a first step towards meeting the targets set by the UK Government (49-51).

This research has found social and psychological factors to be particularly important in determining the quality of diet of women with lower educational attainment. An intervention to improve the food choices and diets of disadvantaged women in Southampton, therefore needs to address these factors, and our analysis suggests that

improving women's sense of control over life is an important first step. We will work with the Sure Start Children's Centre staff in order to do this, knowing that they understand the complexity of this challenge:

> *"'Cos a lot of these women … you talked about not having a sense of control and they're not having support around them, but sometimes it might be that you might be the first person that's said "well done". So they then feel supported and valued, so they can make the next step. And you know, you said about engaging them in groups, making that phone call and saying "we missed you today" and actually to say "we missed you" – "what you missed me?" you know "who misses me? I'm not important". You know this is what some of these women are feeling like. They don't feel important, they don't feel that they've got something to say, they don't feel that they've got control. So you ring them to say "Are you ok? We missed you today" and their self-esteem improves, they become valued, they feel supported and so they can go onto the next step."* [Sure Start practitioner at the expert panel focus group]

Appendices

Appendix A:
Publications arising from this work

Barker M, **Lawrence W**, Baird J, Jarman M, Black C, Barnard K, Cradock S, Davies J, Margetts B, Inskip H and Cooper C. The Southampton Initiative for Health: a complex intervention to improve the diets and increase the physical activity levels of women and children from disadvantaged communities. Journal of Health Psychology 2010 *(in press)*

Barker M, **Lawrence W**, Crozier S, Robinson S, Baird J, Margetts B, et al. Educational attainment, perceived control and the quality of women's diets. Appetite 2009;52:631-6.

Barker M, **Lawrence W**, Skinner TC, Haslam C, Robinson SM, Barker DJP, et al. Constraints on the food choices of women with lower educational attainment. Public Health Nutrition 2008;11(12):1229-37.

Barker M, **Lawrence W**, Woadden J, Crozier S, Skinner TC. Women of lower educational attainment have lower food involvement and eat less fruit and vegetables. Appetite 2008;50:2-3.

Crozier SR, Inskip HM, Barker ME, **Lawrence WT**, Cooper C, Robinson SM, et al. Development of a 20-item food frequency questionnaire to assess a 'prudent' dietary pattern among young women in Southampton. European Journal of Clinical Nutrition 2010;64:99-104.

Jarman M, Pease AS, **Lawrence W**, Barker M and the Food Choice Group, University of Southampton. Why do women of lower educational attainment have lower food involvement than women of higher educational attainment? Proceedings of the Nutrition Society 2010 *(in press)*

Lawrence W, Barker M. A review of factors affecting the food choices of disadvantaged women. Proceedings of the Nutrition Society 2009;68:189-94.

Lawrence W, Skinner TC, Haslam C, Robinson S, Inskip HM, Barker DJP, et al. Why women of lower educational attainment struggle to make healthier food choices: the importance of psychological and social factors. Psychology & Health 2009;24(9): 1003-20

Appendix B:

Focus Group – Information sheet (lower educational attainment)

SOUTHAMPTON Women's SURVEY

FOOD DISCUSSION GROUP
Information Sheet

Would you like to take part in a discussion group & join us for lunch?
We are inviting you to take part in a discussion about food, eating, cooking and shopping with 5 - 8 women like you. This will last about two hours, and will be held at a time to suit you and the other women. We will provide refreshments.

What is this for?
As part of the Southampton Women's Survey, we have collected information from over 12,500 women about their food choices. **We are not judging you**, but want to get your views and opinions on diet and food.

Why have I been chosen?
Sure Start, and other local organisations, have given us permission to invite women attending their centres to take part in this small study.

Who will see what I have to say?
We are not recording your name. Only people working on this part of the SWS study will see the group discussions.

I don't want to take part in this study!
If you don't want to take part in a discussion group, or change your mind about taking part at any time, that is fine.

What if I have a question?
Please call our freephone number **0800 783 4503** and leave a message for Wendy Lawrence to 'phone you back (24 hour voicemail out of office hours).

Many thanks

Local Research Ethics
Committee No:276/97

Appendix C:

Focus Group – Information sheet (higher educational attainment)

DIETARY STUDY
INFORMATION SHEET

Would you take part in a focus group?

We are inviting you to take part in a focus group session, which will consist of about 6-8 women like you, for a group discussion about food, eating, cooking and shopping. We would expect this to last about two hours, and can be held at a time to suit you and the other women. We will refund your travelling expenses and provide refreshments.

What is this for?

The information we collected from you and the other 12,500 women who have taken part in the Survey has proved very interesting, and has raised more questions we would like to ask. In particular, we now wish to find out more about what influences the food choices made by young women in Southampton.

Why have I been chosen?

We want to see women whom we interviewed most recently and you are one of the women who we interviewed in 2002, which was the last year we were recruiting women for the SWS. From this list of women on our database, we selected at random the ones to invite to our focus groups. Women are then allocated to one of the two focus groups based on similar educational backgrounds.

Who will see what I have to say?

All the information, just the same as for the main survey, is kept in strictest confidence. Only people working on this part of the SWS study will see the focus group discussions.

I don't want to take part in this part of the study!

If you don't want to take part in a focus group, or change your mind about taking part at any time, that is fine. We are very grateful for your help in the main part of the Survey. You may 'phone our freephone number **0800 783 4503** if you do not wish to be contacted further, or just tell us when we contact you.

How do I find out the results?

We shall send you a short report telling you what the focus groups have told us about factors influencing the food choices made by women in Southampton.

What if I want further information?

We will be happy to answer any queries. Please call our freephone number **0800 783 4503** and leave a message for Wendy Lawrence to 'phone you back (24 hour voicemail out of office hours).

Many thanks

Local Research Ethics
Committee No:276/97

Appendix D:

Focus Group – Discussion guide

Focus Group – Discussion guide

Areas to cover:

Historical:

Did you eat this sort of thing when you were growing up?

What memories do you have of food shopping, preparation & cooking in:-
- childhood
- adolescence
- 1st time away from home
- own family (partner/kids)

Social:

How do you think your friends, colleagues, family eat (for this meal/snack)?

Different or similar to yourself?

Environmental:

What shopping / preparation / cooking do you do (for this meal/snack)?

Are there any difficulties with any of these areas?

Changes:

Have you changed your diet at all (eg for weight loss reasons/health/finances/time)?

Would you want to?

What aspects would you like to change – what you buy, how you cook, how you organise meal times, what you or family members will eat?

If yes, what do you think prevents you changing?

Who makes the decisions about the food you eat?

What do you think you could (not) change?

Psychological:
[Food involvement / emotional / control / health value/ future salience & priorities]

How much do you think about, or plan – food shopping/preparation/cooking/eating?

Do you sometimes eat:
- when you're not really hungry
- to cheer yourself up
- as a treat or reward
- purely for pleasure?

How much control do you have over what you/your family eat?

Do you think about your health when you plan/prepare/eat food?

Do you think much about your own & family's health?

Where does healthy eating come in your list of priorities? What's important, what worries you?

Views on the future ??
Wishes for children as they grow up & become adults.
In an ideal world – what choices would you make?

WTL/SureStart moderator sched/170805

Appendix E:

Focus Group – Consent form

SOUTHAMPTON WOMEN'S SURVEY
University of Southampton
Biomedical Sciences Building
Mailpoint 731
Bassett Crescent East
Southampton S016 7PX

FREEPHONE: 0800 7834053

CONSENT FORM – FOCUS GROUP

Thank you for agreeing to take part in a focus group as part of the Southampton Women's Survey. This will last about two hours, and look at your eating patterns and what influences them. All the information is kept in strictest confidence

---

Having discussed the procedure with the researcher, I agree to take part in the Focus Group and

I understand that I am free to withdraw from the study:
at any time
without having to give a reason for withdrawing

Signature of participant ..... Date.....

Name of participant (print) .....

Signature of researcher ..... Date.....

Local Research Ethics
Committee No: 276/97

Appendix F:

Focus Group – Demographic questionnaire

Demographic information

We would like to ask you a few brief questions about yourself:

A: How old are you? ☐☐ yrs

B: How many children (<18yrs) live with you? ☐

[Comments: .....

.....

C. How old were you when you left full-time education ? ☐☐ yrs
(don't round up;
enter current age if still studying;
count a year or less out as continuous education)

D. Have you passed any exams or do you have any formal qualifications ? ☐
(insert number to show the highest level reached)

1 None

2 CSE / School cert / GCSE (grade D or lower) / NVQ1 / Foundation GNVQ

3 levels / Matric / GCSE (grade A,B,C) / RSA secretarial / NVQ2 / Intermediate GNVQ

4 A levels / City & Guilds / EN(G) / ONC / NNEB / BTech (day release) / NVQ3 / Advanced GNVQ / OND / HNC

5 HND / RGN / Teaching Cert / NVQ4

6 Degree / NVQ5

7 Other (specify): .....

Appendix G:

Focus Group – Coding frame

Code Name	Description	Exclusions	Examples
Historical-childhood	Experiences of shopping, cooking & family mealtimes; parental attitudes & behaviour	Any mention of dietary changes & food choices NOT associated with life stages.	"Very strict meals and if we didn't like what was cooked then we would have to go to the next meal before we had anything else."
Historical-single adult	Life stage transition – changes due to experience of living alone		"When I lived on my own …"
Historical-marriage/partner	Life stage transition – changes due to experiences once in a relationship		"I used to be really small and then I met my husband and that was it, I got fat."
Historical-children	Life stage transition – changes due to experiences during pregnancy & since having children		"before we had the children …"
Social-peers	Peer influences on woman or family, comparison of eating habits with friends/colleagues / social context		"a lot of people can't even cook"
Social-family	Comparison of eating habits with relatives, inc influence of partner &/or children		"my sister has the same sort of tastes as I have, but my mum hasn't …"
Social-company	Context of own eating – who's around, woman's mealtime experiences		"if my kids go *away* for the weekend, I don't cook a whole big dinner for myself."
Environment-cost	Cost of food, consideration of budget/value foods	NOT suggestions for ways of improving diet.	"So to buy like proper cod fish fingers and things like that are more expensive than buying 20 …
Environment-waste	Worrying about wasting food		"Um, fresh goes off, probably like everyone in the family doesn't really eat it".
Environment-shopping	Shopping practices & access to shops		"Well I don't drive, that why I do mine daily".
Environment-time	Time pressures & making time		"Quick and easy, if you've got in late or kids are tired". "… take the time and do fruit meringue …"
Environment-home	The home environment & associated problems, inc boredom	NOT emotional eating.	"Evenings and weekends. Weekends are the worst".
Environment-work	The effect of the work environment on food choice/ eating habits		"… she works, she you know she's not at home, so her eating habits have totally changed".
Environment-eating out	Any reference to eating out & take-aways		"Take the kids down to McDonalds or something …"

Psychological-control	Who's controlling the food choices of family? Family demands & refusals/fussy eaters.		"My husband tells me what to cook and I cook it".
Psychological-restraint	Own self-control (or lack of control) over food/eating opportunities on own eating behaviour; dieting or dysfunctional eating habits	NOT due to presence/ absence of others at mealtime	"I can go all day, I've gone a couple of days without food before when I've, cos I've just not thought about it…"
Psychological-health-now	Health value - consideration of own or other's immediate health; current health issues. Explicit mention of current well-being / health.	NOT long-term health considerations	"… my body hasn't had anything for hours when I've been asleep, um so I just kick start it, it gives me energy as well".
Psychological-health-future	Health value - consideration of own or other's future health; good/bad food distinctions	NOT short-term health considerations	"Oil and stuff's not good for you. It hardens and sticks to all your arteries, it's disgusting"
Psychological-self-esteem	Low self-esteem/self-worth, always putting others first & not taking time for self		"… so most of the time, I make them dinner and then I end up eating rubbish later on …"
Psychological-food involvement	Interest/engagement with food, eg reads articles, labels or recipes, watches TV progs, aware of nutrients & dietary advice, planning, preparing & cooking; awareness of changing preferences/tastes over time		"It's more fun to go and cook it than it is to go out and buy the biscuits or cakes …" "No, I'm not interested in food … I need to be in the mood to eat."
Psychological-emotion	Eating associated with boredom, mood, pleasure, reward		"When I get upset, if I'm sat in doors and I'm depressed … I'll sit there and eat loads."
Psychological-confidence	Confidence or lack of it regarding cooking & associated activities. Evidence of low or high self-efficacy.		"And I would think, OK I can do that, yeah." "I'm just scared it's going to go wrong I think."
Intervention-education	Wish to learn more about foods, cooking, inc demonstrations		"It's a lot easier and simpler to have someone to show you and then you taste it after and then … you can actually see what it looks like."
Intervention-activities	Wish to engage in activities outside the home, inc exercise programs		"… be a bit more active and then if I was more active I wouldn't be sat there thinking about food and eating food …"
Intervention-cost	Healthy food to be more affordable, food vouchers, etc		"In an ideal world I'd be able to go round Tesco's and chuck it in the trolley and think I don't care when I get to that till how much it's going to cost, but I do …"
Intervention-other	Any other suggestions for helping change		"Other things delivered, anything delivered".

Appendix H:

Nutrition & Well-being Study – Questionnaire

Location:	ID:

Interviewer:	Date:

NUTRITION & WELL-BEING STUDY

We are interested in what influences the food choices of women in Southampton.

This questionnaire is designed to find out about what you eat, when you eat it and how you're feeling in general. It also asks for some background details about you.

It is **not** a test and we are interested in your honest answers only.

Your answers are strictly **confidential** and your name will not be put on the questionnaire. I will take the questionnaire away when you have finished.

You will generally be asked to indicate the answer that describes you best.

Before we start, would you be happy for me to make a note, on a separate sheet, of your name and contact details, in case we are interrupted and can't finish the questionnaire today. This means I would be able to contact you to finish it another day, when it suits you.

[Fill in contact details on sheet]

Thank you very much for your help

This questionnaire has been compiled by Dr Mary Barker and Wendy Lawrence
Food Choice Group
Medical Research Council Epidemiology Resource Centre
University of Southampton
June 2007

About you

In this section, we just want to know a little bit more about you.

1. How old are you? ☐☐ years

2. How many children (under 18 years) live with you? ☐

3. How old were you when you left full-time education ? ☐☐ years
(don't round up;
enter current age if still studying;
count a year or less out as continuous education)

4. Have you passed any exams or do you have any formal qualifications ? ☐
[Refer to prompt card & enter number in the box to show highest level reached]

5. How many hours a week do you generally work outside of the home? ☐☐ hours

Your eating habits

In this section, we want to know more about some of the foods you eat and how often you eat them.

[TICK one box on each line for every item – show response prompt sheet table [i] & refer to FFQ prompt sheet if necessary]

OVER THE PAST MONTH HOW OFTEN HAVE YOU EATEN THESE FOODS?								
	Over the past month	Never	Once a Month	Once every two weeks	1-2 Times per Week	3-6 Times per Week	Once a day	More than once a day
6	Roast Potatoes and chips							
7	Peppers and watercress							
8	Tomatoes							
9	Meat pies							
10	Vegetable dishes							
11	Courgettes, marrow and leeks							
12	Sausages and sausage rolls							
13	Gravy							
14	Green salad							
15	Wholemeal bread							
16	White bread							
17	Onion							
18	Vegetarian food							

OVER THE PAST MONTH HOW OFTEN HAVE YOU EATEN THESE FOODS?								
	Over the past month	Never	Once a Month	Once every two weeks	1-2 Times per Week	3-6 Times per Week	Once a day	More than once a day
19	Pasta							
20	Yorkshire pudding and savoury pancakes							
21	Crisps & savoury snacks							
22	Beef							
23	Spinach							
24	Fresh fruit							
25	Approximately how many teaspoons of **sugar** do you add each day to breakfast cereals, tea and coffee, etc?						teaspoons	
26	How much **full-fat milk** on average do you use per day in your drinks, added to breakfast cereals, etc?						pints	

STILL THINKING ABOUT YOUR EATING IN THE PAST MONTH, HOW OFTEN HAVE YOU ...								
	Over the past month	Never	Once a Month	Once every two weeks	1-2 Times per Week	3-6 Times per Week	Once a day	More than once a day
27	... eaten fresh vegetables?							
28	... eaten frozen vegetables?							
29	... eaten tinned vegetables?							
30	... eaten an evening meal cooked from "scratch"?							
31	... eaten a microwave dinner for your evening meal?							

OVER THE PAST MONTH, HOW OFTEN HAVE YOU ...

	Over the past month	Never	Once a Month	Once every two weeks	1-2 Times per Week	3-6 Times per Week	Once a day	More than once a day
32	... eaten take-away food including fish & chips, for your evening meal?							
33	... eaten breakfast with your family?							
34	.... eaten a meal in the evening with your family?							
35	... sat down at a table to eat a meal with your family?							

Now thinking about your family and friends,

HOW OFTEN IN THE PAST MONTH DID *MEMBERS OF YOUR FAMILY* ...

	Over the past month	Never	Once a Month	Once every two weeks	1-2 Times per Week	3-6 Times per Week	Once a day	More than once a day
36	... eat healthy foods with you?							
37	... encourage you to eat healthy foods?							
38	... discourage you from eating **un**healthy foods?							

HOW OFTEN IN THE PAST MONTH DID *FRIENDS* ...

	Over the past month	Never	Once a Month	Once every two weeks	1-2 Times per Week	3-6 Times per Week	Once a day	More than once a day
39	... eat healthy foods with you?							
40	... encourage you to eat healthy foods?							
41	... discourage you from eating **un**healthy foods?							

Food and money

People do different things when they are running out of money for food, to make their food or their food money go further.

[TICK one box for each question]

42. In the last 12 months did you (or other adults in your household) ever reduce the size of your meals or skip meals because there wasn't enough money for food?

No *(go to 44)* ☐ Yes ☐

43. How often did this happen?

In only 1 or 2 months? ☐ Some months, but not every month? ☐ Almost every month? ☐

44. In the last 12 months did you ever eat less than you felt you should because there wasn't enough money to buy food?

No ☐ Yes ☐

45. In the last 12 months were you ever hungry but didn't eat because you couldn't afford enough food?

No ☐ Yes ☐

Here are 2 statements that people have made about their food situation. For these statements, please tell me whether the statement was '**never true**', '**sometimes true**', or '**often true**', for you (or other members of your household) in the last 12 months.

46. 'The food that I / we bought just didn't last and I / we didn't have money to get more'.

Never true ☐ Sometimes true ☐ Often true ☐

47. 'I / we couldn't afford to eat balanced meals'.

Never true ☐ Sometimes true ☐ Often true ☐

About your feelings

This section is about how you have been feeling. Please say which answer best describes how you have felt over the last 2 weeks

*[TICK one box on each line for every item – show response prompt sheet table **[ii]**]*

	Over the last two weeks ...	All of the time	Most of the time	More than half of the time	Less than half of the time	Some of the time	At no time
48	I have felt cheerful and in good spirits						
49	I have felt calm and relaxed						
50	I have felt active and vigorous						
51	I woke up feeling fresh and rested						
52	My daily life has been filled with things that interest me						

Please say how much you agree or disagree with each of these statements about how you feel.

*[TICK one box on each line for every item - show response prompt sheet table **[ii]**]*

		Strongly Agree	Agree	Disagree	Strongly Disagree
53	At home I feel I have control over what happens in most situations.				
54	I feel that what happens in my life is often determined by factors beyond my control.				
55	Over the next 5 – 10 years I expect to have many more good things than bad things happen.				
56	I often have the feeling that I am being treated unfairly.				
57	In the past 10 years, my life has been full of changes without my knowing what would happen next.				

		Strongly Agree	Agree	Disagree	Strongly Disagree
58	I gave up trying to make big improvements or changes in my life a long time ago.				
59	Keeping healthy depends on things that I can do.				
60	There are certain things I can do for myself to reduce the risk of heart disease.				
61	There are certain things I can do for myself to reduce the risk of cancer.				

Women in Southampton have told us about some of their experiences of feeding themselves and their families. Please say how often these things happen in your household?

[TICK one box on each line for every item - show response prompt sheet table [iv]]

		Never	Almost never	Some-times	Fairly often	Very often	Doesn't apply
62	My partner tells me what to cook and I cook it!						
63	If my children throw their food away, I give them something else … something they do like.						
64	I cook meals and I just get fed up of doing it, because they won't eat it.						
65	I have to cook my partner's meals fresh 'cos he hates chips or rice or pasta, anything like that, reheated.						
66	I'll buy a more expensive brand, because I know that they'll eat it.						
67	My partner eats everything that I cook anyway ... whether he likes it or not.						
68	If they don't eat it, they don't get anything … that's it.						
69	I don't get a lot of support at home for cooking healthy meals so I tend not to bother.						
70	Once I start eating I can't stop.						

Next are some questions about how you overcome difficulties and problems in your life. Please say how true each statement is for you.

[TICK one box on each line for every item - show response prompt sheet table [v]]

		Not true	Some-times true	Usually true	Always true
71	I can always manage to solve difficult problems if I try hard enough.				
72	I can find a way to get what I want even if someone is trying to stop me.				
73	It is easy for me to stick to my aims and reach my goals.				
74	I am confident that I can cope with unexpected events.				
75	Because I am resourceful, I know I can handle things I'm not expecting.				
76	I can solve most problems if I put in enough effort.				
77	I am calm when things are difficult because I know I can cope.				
78	When I have a problem, I can usually think of several solutions.				
79	If I am in trouble, I can usually find a way out.				
80	I can usually handle what comes my way.				

Please say how much you agree or disagree with each of these statements about healthy food.

[TICK one box on each line for every item - show response prompt sheet table [vi]]

	I know that if I eat healthy foods ...	Strongly Agree	Agree	Disagree	Strongly Disagree
81	I'll feel physically more attractive.				
82	I won't have any weight problems.				
83	Food won't taste as good				
84	I won't have so much fun when I go out.				
85	It will be good for my blood pressure.				

	I know that if I eat healthy foods ...	Strongly Agree	Agree	Disagree	Strongly Disagree
86	I'll feel happier.				
87	I'll have to put in more effort to buy the right foods.				
88	It will be good for my cholesterol levels.				
89	I'll have to spend more time preparing meals.				
90	I won't have such a good life.				
91	It will cost me more.				
92	Other people will admire my willpower.				

A question about your clothes size ...

93	What sizes would you normally try on when buying clothes? *[Circle which sizes – more than one if necessary]*			
	6 – 8	8 - 10	10 - 12	12 - 14
	14 - 16	16 - 18	18 - 20	20 -22
	22 - 24	24 - 26	26 - 28	Above

We want to know how you think about what you're going to cook and eat, and what you feel about preparing food.
Please say how much you agree or disagree with each of these statements.

[TICK one box on each line for every item – show response prompt sheet table [vi]]

		Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree	*Office use only*
94	I don't think much about food each day						
95	Cooking or barbequing is not much fun						
96	Talking about what I ate or am going to eat is something I like to do						
97	Compared with other daily decisions, my food choices are not very important						
98	When I travel, one of the things I anticipate most is eating the food there						
99	I do most or all of the cleaning up after eating						
100	I enjoy cooking for others & myself						
101	When I eat out, I don't think or talk much about how the food tastes						
102	I do not like to mix or chop food						
103	I do most or all of my own food shopping						
104	I do not wash dishes or clean the table						
105	I care whether or not a table is nicely set						

That's all the questions.

Thank you very much for your help

Appendix I:

Nutrition & Well-being Study – FFQ prompt card

No	FFQ item	Prompts - examples/inclusions
6	Roast potatoes and chips	Potato waffles; fried potatoes
7	Peppers and watercress	Raw & cooked
8	Tomatoes	Fresh & tinned; tomato juice
9	Meat pies	Pasty; steak & kidney pie; chicken pie; pork pie
10	Vegetable dishes	Ratatouille; vegetable curry; vegetable pasty; vegetable bake; vegetable lasagne
11	Courgettes, marrow and leeks	Fresh & frozen
12	Sausages	Sausage roll; hotdog; salami; kabanos
13	Gravy	Granules & powders; Bisto
14	Green salad	Lettuce; cucumber; celery; radish
15	Wholemeal bread	Toast & rolls; rye bread; wholemeal pitta
16	White bread	Toast & rolls; Mighty White; French bread; pitta bread; croissants
17	Onion	Raw & cooked; fried onion; pickled onion; spring onion
18	Vegetarian food	Vegeburgers & sausages; soya-based foods; quorn products
19	Pasta and dumplings	white, green & wholemeal pasta – fresh / dried; tinned pasta in tomato sauce; pasta in dishes such as lasagne; noodles
20	Yorkshire pudding and savoury pancakes	
21	Crisps & savoury snacks	Wotsits; Chipsticks; Skips; Twiglets; Mini Cheddars
22	Beef	Roast & steak; beef(ham)burger; corned beef; stews & casseroles; curry
23	Spinach	Fresh & frozen
24	Fresh fruit	

Appendix J:

Nutrition & Well-being Study – Information sheet

MRC Epidemiology Resource Centre (University of Southampton)
Southampton General Hospital, Southampton SO16 6YD UK

MRC Epidemiology Resource Centre

NUTRITION & WELL-BEING STUDY

Participant Information Sheet

What is this study for?

As part of the Southampton Women's Survey, we have collected information from over 12,500 women about their diet and food choices. We have learnt a lot from this, but now want to know what you think, and how you feel about your own and your family's eating habits.

What do I have to do?

Will you help us fill in a questionnaire about you, how you feel and what you think about food, eating, cooking and shopping? The questionnaire will take about 15 minutes to fill in. We will fill it in here at the centre.

Why have I been chosen?

You are a woman living in one of the areas of Southampton that we have chosen for our research.

Who will see what I have to say?

Only people working on this study will see the questionnaire we fill in about you. Any information you give us will have your name taken off it before we pass it on to other researchers in our team, or publish it. All information you give us will be stored safely.

I don't want to take part in this study!

If you don't want us to fill in the questionnaire about you, or change your mind about it at any time, that is fine. Any information you have given us will be destroyed.

What if I have a question or want to complain about this study?

Please call the Southampton Women's Survey freephone number **0800 783 4503** and leave a message for Wendy Lawrence to 'phone you back (24 hour voicemail out of office hours).

Research Ethics Committee No. IC01
Version 1

Appendix K:

Nutrition & Well-being Study – Consent form

MRC Epidemiology Resource Centre

UNIVERSITY OF Southampton School of Medicine

(University of Southampton),
Southampton General Hospital
Southampton SO16 6YD

Contact number for researchers
Freephone: 0800 783 4503
(24 hour voicemail)

Participant ID number:

CONSENT FORM – Nutrition and Well-being Study

Researchers: Dr Mary Barker and Wendy Lawrence

	Your initials
I have read and understood the Information Sheet (version 1) for this study. I have been able to discuss the research with the researcher who has answered my questions.	☐
I understand that I am free to stop taking part in this study at any time, without having to give a reason, and that this will not affect my medical care or my legal rights.	☐
I agree to take part in this study.	☐

Your name ……

Your signature …… Date ……

Researcher's name ……

Researcher's signature …… Date ……

Appendix L:

Expert Panel Focus Group – Discussion guide

Discussion guide for Expert Panel Focus Group

1. Introductions

   State aims of the day – their views/experiences with women in "Sure Start" areas, particularly in relation to nutrition. Ask each to introduce themselves with their job title/role. Present our slide – explain 4 factors in a little detail.

2. Substance / Content

   4 important factors affecting food choice (personal control, social support, outcome expectancies, food involvement) & extra issues (well-being/household security). Egs of all these as clarification.
   How can these be addressed – consider throughout all subsequent topics?
   Staff knowledge/expertise in these areas?
   Initial thoughts/concerns/interest

3. Delivery

   What is the existing structure for delivery? ie Surestart programmes – are these modifiable?
   Problems with our intervention, or with existing modes of delivery?
   New structures/resources needed?
   Training needs – delivery/data collection (questionnaire completion)

4. Engagement

   Women's input in development of initiatives – "ownership"
   Who is the target population?
   If through Surestart Children's Centres, who do we miss?
   How do we engage participants?
   How do we retain them?
   Incentives – phone credit/crèches, vouchers (food/sports facilities)?
   Peer networking – spread the word

5. On-going support

   How? Text, phone, face-2-face? Who? When?

6. Monitoring / Evaluation

   Programme integrity/fidelity
   Standardised approach

7. Staff/provider interest/enthusiasm

   Boredom
   Role of feedback/research aims in maintaining enthusiasm?

8. Sustainability

   Past experiences?
   Suggestions?

Appendix M:

Expert Panel Focus Group – Consent form

NUTRITION & WELL-BEING STUDY
MRC Epidemiology Resource Centre
(University of Southampton)
Southampton General Hospital
Southampton
SO16 6YD

SWS Freephone: 0800 783 4053

CONSENT FORM – EXPERT PANEL FOCUS GROUP

Thank you for agreeing to take part in a focus group as part of the Nutrition and Well-being Study. This will last about 1-1½ hours, and look at your experiences working with women within the city, particularly in relation to diet. All information collected is kept in strictest confidence.

Having discussed the procedure with the researcher:	*Please initial each box*
I agree to take part in the Focus Group.	☐
I agree to the discussion being recorded for transcription and analysis by the research team.	☐
I understand quotes from the discussion will be used by the research team when presenting and writing up the findings, but that these will be anonymous.	☐
I am happy for my job title to be included in the description of the focus group profile.	☐
I understand that I am free to withdraw from the study at any time, without having to give a reason for withdrawing.	☐

Signature of participant ..... Date .....

Name of participant (print) ..... Age .....

Job title .....

Signature of researcher ..... Date .....

School of Medicine REC No: IC01

Appendix N:

Expert Panel Focus Group – Coding frame

EXPERT FOCUS GROUP: THEMATIC CODING FRAME

Improving the diets of disadvantaged women

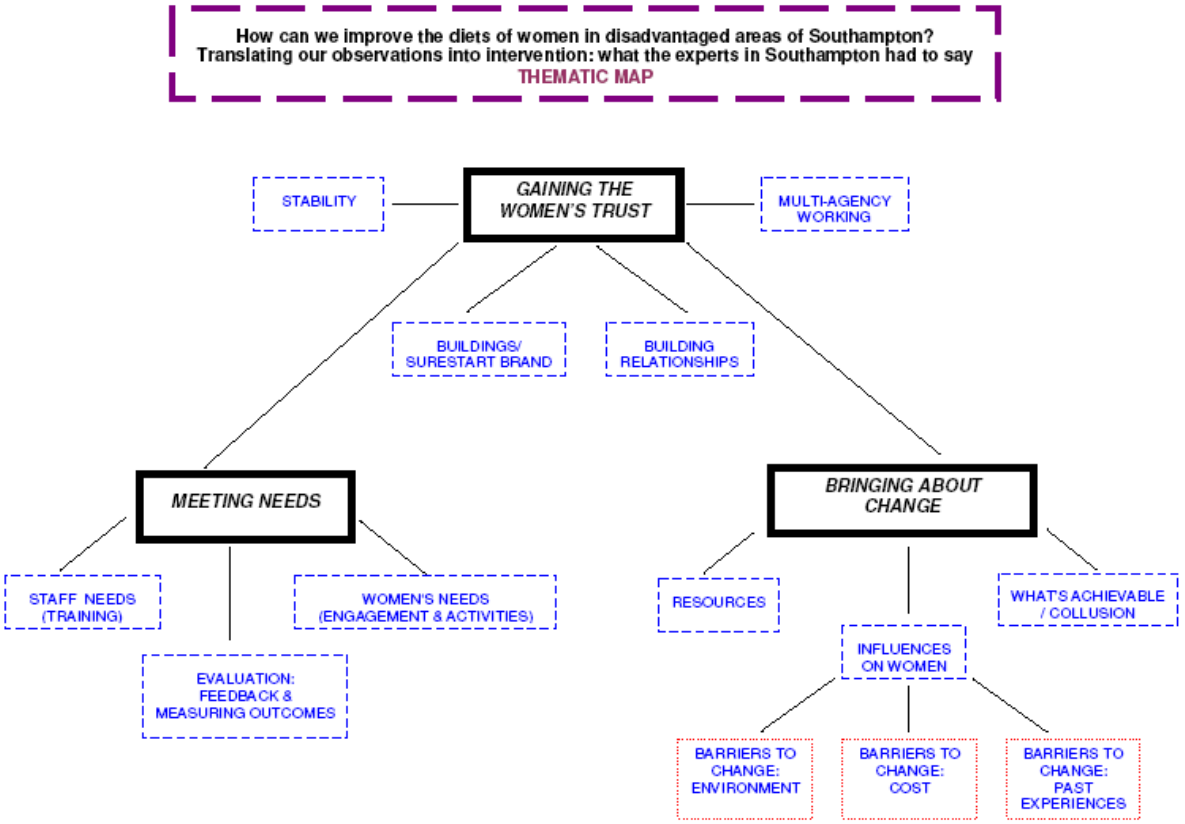
How can we translate our observations into intervention: what the experts in Southampton had to say

CODE NAME	DESCRIPTION	EXAMPLES
Gaining the women's trust	**Stability**: permanence, longevity, regularity vs recency/newness; any reference to time	159-61 Millbrook is a longer term children's centre, where Shirley Warren is a very new one. You almost need to get acceptance of the Sure Start value before they access the service … trust …
	Buildings/SureStart "brand"	174-7 Yes, because the nearest place where we can actually do any sessions or anything with the families is All Hallows Church and you've been there and you know the issues. I don't need to say anymore about that. A brand new building, bright and right in the centre of the community is inevitably going to be a positive aspect of engaging families.
	Building relationships: feeling valued & enhancing positive feelings, eg self-esteem, motivation	528-31 So you ring them to say "Are you ok? We missed you today" and you know, they become, their self-esteem improves, they become valued, they become, feel supported and so they can go onto the next step.
	Multi-agency working: different professions, communication	760-1 So we have different levels that we can re-engage with families with our Health Visiting, family support workers, all different agencies.
Meeting needs	**Staff training needs** **and** **Training experiences**	263-6 Sometimes with the cultural, the difference in culture, it's quite difficult to know exactly what the constituents of their diet are. With the Polish families we find this as well. Some of the soups I think have quite high salts. So it's lack of knowledge within our services as to what, what constitutes their diet. 393 We do, Health Trainers. That's all our training was mainly based on – behaviour change.
	Women's needs: efforts to engage the women in order to meet their perceived needs, inc activities offered; how is attendance encouraged; what's working?	216-7 We've also done cooking in schools. We do cooking with the excluded boys, obviously slightly older parents but still single parents, most of them. 364-6 I think you've got to offer mixed delivery. So if some, one-off taster session and courses is the answer. Because some people will never attend a 6 week course but you might actually get them along to a healthy eating event.

	Evaluation: Feedback: assessing good practice. **and** **Measuring outcomes**: are things changing?	973-5 … we'd love it more in health visiting because we've got commissioning coming on much more strongly and to be able to actually say this is really good, this is what we do, capture all that gold dust that's done and you've sort of dusted under the table. You just don't capture it enough and evaluation would really be a help. 732-3 There is some through some of the monitoring that we collect. There is actually available obesity levels in the city which have shown that particularly with Weston a declining obesity in children.
Bringing about change	**Resources:** funding / people NOT in relation to the women – that goes below in "Barriers to eating healthily: cost".	1118-20 And there are swings and roundabouts to the funding issue because sometimes if you haven't got the money, it makes services reconfigure to enable that to happen. It isn't always good to have a financial carrot. 778-87 Sometimes, you know, the priority has to be in that core delivery of that service that might be commissioned by Sure Start but they actually need to deliver that core activity and an extra phone call or follow-up might not be as priority as a child protection visit.
	Influences on women: barriers to eating healthily: environmental, eg home/family, shopping, time	57-59 … a lot of my families haven't got access to a car and so they have to do everything by bus and the nearest big supermarket is at Bitterne, which is quite a trek when you've got young children in a pushchair and bags and everything else . That is inevitably going to make an impact. Some of the shops that are there at Townhill Park just don't stock any fresh vegetables or fruit or it is very limited.
	Barriers to eating healthily: cost	1245-7 your value Coca Cola is less expensive than your fruit juice, box of orange juice - but that's a whole different story.
	Barriers to eating healthily: past experiences	78-81 I know that some of the families that I've come across, actually historically their families haven't provided fruit and veg and actually 2 sisters that came with their children said their parents never gave them fruit.
	What's achievable by way of behaviour change: staff collusion - small steps? NOT in regard to service delivery, funding etc.	235-8 And I think the other thing is about being realistic about what the changes are we can make. You know, if they're going to cook sausages, let's teach them to put them in the oven with nothing else to cook them or put them with something else rather than expect them to completely change their diet over night.

Appendix O:

Expert Panel Focus Group – Thematic map



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