

Travelling People, Travelling Plants: An
Exploration into Food-Plant Practice among
Bengali Women across Transnational and
Generational Landscapes

By

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A thesis submitted for the degree of Doctor of Philosophy

In Medical Ethnobotany

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I Hannah Maria Jennings confirm that the work presented in this thesis is my own.

Where any information has been derived from other sources, I confirm that this has been indicated.

Abstract

The flow of people between urban Britain and rural Bangladesh is longstanding and continuous. In addition to people; food, plants and seeds are transported between the countries. The exchanges are both practical and highly symbolic processes and while transnational in nature have a significant impact at a local level in both places. The PhD thesis explores the nature of food and plant exchange between Sylhet (Northeastern Bangladesh) and the UK among women at a household level, how these transnational exchanges impact on the food-scape and medicinal plant knowledge in each place and how differences are played out across generations. The PhD adopted a mixed methods approach (participant observation, interviews, focus groups and questionnaires) with research conducted in Cardiff, London and Sylhet among two generations of Bengali women.

Research into ethnobotanical practices of migrant communities in industrialised countries has found a rich and distinct body of knowledge. However, among the substantial and well-established UK Bengali population there is a lack of research on ethnobotanical medicinal knowledge. Furthermore how they are influenced by on-going links with Bangladesh is unknown. The therapeutic use of plants among Bengalis exposes a significant overlap between food and medicine, this is an area largely ignored in public health, medical and food studies of Bengalis in the UK. This thesis builds on previous research and begins to address some of the gaps in literature. The research it presents indicates that the Bengali community in the UK remains connected to their place of origin (Sylhet), not least through the exchange of food and plants, however what these food and plants mean vary according to place and generation. If academics and professionals are to understand therapeutic food-plant use among diaspora it is essential to look at the existing links with 'home' countries and changes in knowledge and practice across generations and ages. The implications of this research are important for ethnobotany, migrant and international health studies, public health and food studies.

Acknowledgements

For everyone that has accompanied me on the journey of this PhD I am sincerely grateful.

First I would like to thank my family. Being part of a very transnational family meant that I had the good fortune of always having family members close by during my travels throughout the PhD. My parents, Diane and James Jennings, gave me encouragement and support throughout the whole process. Without them I would have neither started nor finished the PhD. My older brother and sister-in-law Nathaniel and Donna Jennings, offered me a place to stay when I was writing the thesis. Thank you for that and for your support. Their children Micah and Tabitha were delightful distractions and helped keep me sane during what was, at times, a painful process. My sisters, Beth and Sarah Jennings, and little brother, Andrew Jennings, thank you too for being there always.

I would like to thank my supervisor Michael Heinrich for his help, support and patience throughout my four years at the School of Pharmacy. I would also like to give a big thank you to my wonderful colleagues and friends at the School of Pharmacy. I've appreciated our coffee break, drinks in the pub, chats in the office, extended lunch breaks and travels to various conferences and trips we have managed to attach to them. For your friendships at various points throughout the PhD thank you. Particularly I would like to thank the past and present members of 'Heinrich's research group' which I so enjoyed being a part of: Nisarath Siriwatanmetanon, Michelle Viteri-Alarcón, Rocia Alarcón, Sarah Edwards, Ivan Casselman, Fon Lumlerdikij and Marianne Jen Datiles thank you all. A special thanks to Johanna Michl, Amaka Ezuka, Tony Booker and Ines Rocha. It has been fun! (Mostly). Thank you also to my second supervisor Felicity Smith for reading through my thesis.

The PhD would not have been possible without the project MINA, or ESRC funding. Thank you to all my MINA colleagues, I have learnt a lot from you all, and have enjoyed the occasions when we have managed to meet. Joy Merrell and Barry Bogin have always taken time to read through work I have written. A special thanks to Janice Thompson, who despite an incredibly busy schedule, has always been very supportive and never too busy to give me feedback on any of my work.

Throughout the PhD I was helped by numerous people in the UK and Bangladesh, who were so generous with their time and willingness to help me. In Sylhet, old friends of my parents at FIVDB and newer members of the organisation were incredibly welcoming and helped me in many ways; from providing a desk for me to write up my work, to discussing my work and organising visits to different community groups. Thank you all and particularly thanks to Zahin Ahmed, Roshnara Apa and Oli Chowdhury. Sanjoy and Zilal, also in Sylhet, were invaluable in helping me collect various plants and telling me about their local names and uses. I would also like to thank Dr. Zashim and Professor Rahmatullah, who were always on hand to help me identify various plants, give advice and discuss our work. In London without the help of several people it would have been impossible to have found and engaged with the community centres and city farm where I carried out research. I would particularly like to thank Sarah Lake, Elizabeth Venables, Pamela Liaquat and Habiba Ali.

Travelling between the UK and Bangladesh I have been fortunate enough to have friends in both places. Without them, living in and between both places would have been difficult. So thank you for making the experience enjoyable, especially when I needed a break from my studies. Concia and Marquel Weekes, Darya Charniak, Delwar Hussain, Dipti Soren and Shahanna Begum thank you all especially.

I would like to acknowledge the participants in the research, who I cannot name for obvious reasons. I was genuinely touched by their warmth, openness and eagerness to share their knowledge as well

as many delicious meals! Thank you also to my Sylheti family. While, I have known them all my life, being able to live with them for several months at a time enabled me to get to know them at a deeper level and be a part of their everyday lives. It was a pleasure sharing their joys, troubles, dramas and food.

Finally, I would like to acknowledge my Nani, who passed away shortly after my first stint of fieldwork in Bangladesh. Though physically she became increasingly frail during the last few months I spent with her, her mind remained as sharp as ever. She continued to show me love, tell me stories and make me laugh until the end. It was a pleasure and honour spending the last six months of her life with her.

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Acronyms

BD - Bangladesh

BMI – Body Mass Index

BBS – Bangladesh Bureau of Statistics

BMJ – British Medical Journal

CAM – Complementary and Alternative Medicine

CVD – Cardiovascular Disease

DGHS - Directorate General of Health Services (Bangladesh)

DFID – Department for International Development (UK)

DWP – Department of Work and Pensions

ESDS – Economic and Social and Social Data Service

ESRC – Economic and Social Research Council

EU – European Union

FGD – Focus Group Discussion

HDR – Human Development Report

HM – Herbal Medicine

HSE – Health Survey England

IBSS – International Bibliography of the Social Sciences

ICDDR,B – International Centre for Diarrheal Disease Research, Bangladesh

JEP – Journal of Ethnopharmacology

JSTOR – Journal Storage

MINA – Migration, Nutrition and Aging

MOHFW - Ministry of Health and Family Welfare

NDA – New Dynamics in Aging

NCD – Non-communicable Diseases

NHS – National Health Service

NIPORT – National Institute of Population and Training Research

ONS – Office for National Statistics

TK – Traditional Knowledge

PhD – Doctor of Philosophy

SPSS – Statistical Product and Service Solutions

SOP – School of Pharmacy

SOAS – School of Oriental and African Studies

UCL – University College London

UNDP – United Nations Development Programme

UK – United Kingdom

WHO – World Health Organisation

Chapter One: Introduction

1.1 Opening remarks and key themes

*“There is a place in this world – the most beautiful, compassionate.
There the green delta is awash with honey-sweet grass;
The trees with the names jackfruit, aswattha, banyan, jamrul, cashew.
The clouds at dawn awake the nata fruit like the red round sun.”*

(verse by Jibananda Das, translation unknown¹)

The first few lines of the poem, by the famous late Bengali poet Jibananda Das, conjure up images of trees and greenery, evoking senses of sight, taste and smell. This nostalgic image of Bangladesh is reminiscent of the descriptions by Bengali women I met in London while conducting research for my PhD. However, descriptions of Bangladesh were not always so favourable, and there were often contrasting views. Nevertheless, it was clear that on-going links to Bangladesh were important to the consumption of food and medicine here in the UK. When exploring the food-medicine-scapes in Bangladesh, the impact of the UK was evident. While the links are global, the experiences are localised and their impacts and meanings vary across individuals, families, and generations. This PhD thesis aims to capture the dynamic and changing nature of plants, consumed as food and medicine by Bengali women both in the UK and Bangladesh, focusing particularly on transnational exchange and generational change.

Before outlining the details of the PhD dissertation and its key aims and objects, the wider project MINA (Migration, Nutrition and Aging), of which it was a part, should first be explained.

¹ The translation was taken from Paul (2002)

1.2 The MINA project

Project MINA (Migration, nutrition and ageing across the life course in Bangladeshi families: a transnational perspective) was a three-year multi-disciplinary New Dynamics of Ageing (NDA) cross-council funded research project managed through the Economic and Social Research Council (ESRC), which was funded from the 1st December 2008 through to the 30th November 2011. The NDA programme is a collaborative multi-disciplinary research initiative, with the overall aim of advancing understanding of the dynamics of ageing, in order to ultimately improve the lives of older people in the UK. The project, being multi-disciplinary, involved co-investigators with expertise from eight academic backgrounds, including: public health nutrition and exercise, public health nursing, biological anthropology, health psychology, ethnobotany, and environmental and media design, in addition to advisors from the disciplines of migration and social anthropology and social gerontology.

MINA explored ageing, migration and nutrition across two generations of Bengali women residing in the UK and in Bangladesh. The overall aim of the project was to gain a better understanding of the impact of migration on nutritional status, food practices and beliefs, experiences and perceptions of ageing. The primary research questions explored were:

1. Does migration impact on nutritional status, food practices, health and ageing among first generation Bangladeshi women?
2. What is the impact of migration on lifestyle changes in middle and later life of first generation Bangladeshi women?
3. How does migration affect nutritional status, food practices, health and ageing of the successive generation of women living in the UK?
4. How does migration affect changes in nutritional status, food practices, health and ageing compared with non-migrating women of similar age in Bangladesh?

The questions were addressed through four interrelated work packages. A participatory approach using mixed methods was adopted. Methods employed included questionnaires, in-depth interviews, anthropometric measurements and physical function tests. The sample included 121 women residing in Cardiff, UK and the Sylhet region of Bangladesh. Key findings were that there are high levels of obesity among Bengali women in Cardiff due to frequent consumption of high-fat, high-energy snacks and cultural norms promoting the serving and consumption of large portion sizes and multiple meals throughout the day, low levels of physical function among older Bengali women in Cardiff, and a lower self-reported health status among women residing in Cardiff (NDA, 2012). UK

based participants were found to have higher rates of overweight, obesity and centralised obesity than their counterparts in Bangladesh (NDA, 2012). 65% of older UK participants had a BMI indicative of obesity, as compared to 27.3% of Bangladesh older participants. 42.5% of UK based younger participants were found to be obese, as compared to 13.6% of their younger counterparts in Bangladesh. The MINA project also found that strong links remain between families in the UK and Bangladesh, these links manifest through the sharing of health and food-related knowledge and practices transnationally as well as across generations. Additional findings include the changing nature and structure of Bengali households in the UK, with a move from multi-generational households to more nuclear structures; and that there continues to be a lack of culturally appropriate, linguistically tailored health promotion materials (NDA, 2012). The findings have been disseminated at numerous scientific meetings and conferences, dissemination events and exhibitions.

I received an ESRC PhD studentship through the MINA project. Professor Michael Heinrich (my supervisor) was the ethnobotanical expert for MINA. We worked closely with the MINA project, assisted with data collection in Cardiff, and the findings of the PhD research have contributed to the findings of the MINA project. However my research was independent from the MINA project overall, and focused on participants in London and Sylhet who were not recruited to the MINA project; additionally, the research continued after the MINA project ended.

1.3 The PhD project: aim, key questions and overview of the thesis

The overall aim of the PhD research was to *'gain an in-depth understanding of Bengali women's practices regarding plants for medicinal and health purposes across transnational and generational landscapes.'* The research builds upon existing research and attempts to address some of the gaps in research outlined above. The overall aim of the PhD was achieved through exploring four overlapping and distinct research questions. In the context of Bengali-British women, the key research questions were:

1. How do food and medicine overlap?
2. What is the nature of on-going global links at a household level?
3. What is the impact of these global links at a local level?
4. What is the nature of knowledge transfer across generations?

The questions were developed in response to the literature review (see chapter 2) and were refined over the course of the preliminary research (see chapter 4). The overall aim and the key questions of the research, looking at the lived realities of food-medicine practice, meant that an in-depth qualitative approach was the most appropriate (this is further discussed in detail in Chapter 3: methods). The research was conducted across three locations: Cardiff (for preliminary research and as part of the MINA project), London and Sylhet. In each location where research was conducted there was a focus on different key questions. In the concluding chapter, the thesis focuses on the impact of transnational exchanges on the food-medicine-health-scapes of households and how and food-medicine-health-scapes change across generations. The outline of the PhD thesis is as follows:

Chapter 1: Introduction: This chapter outlines the overall aims of the PhD as well as the key questions to be examined. Important definitions are also explained.

Chapter 2: Literature review: This chapter outlines important literature that is relevant to the research. It has four main sections: 'Bengalis in the UK', 'food, health and migration', 'ethnobotanical studies' and 'Bangladesh: health and migration'. The literature review provides background information for the research, builds on existing research and begins to address gaps in the research.

Chapter 3: Methods: This section describes the overall approach and methods employed, in the research for the PhD.

Chapter 4: Preliminary research: This chapter reports the findings of preliminary research conducted in Cardiff. It provides information regarding commonly used food-plants; the data generated reveals key generational differences in food plants used, as well as sources of food-plant knowledge (these data address research question 4: what is the nature of knowledge transfer across generations?).

Chapter 5: Supply chains: This chapter addresses research question 2 (what is the nature of on-going links at a household level?). Drawing on research from London and Bangladesh, this chapter examines what is exchanged and the meanings of these exchanges. Drawing on the concepts of 'capital' and theories of gift exchange, it provides a theoretical basis for the impact of these exchanges at a local level, as explored in the two subsequent chapters. The critical aspects of gift exchange and how they embody different perspectives as well its impact on localities are critical

aspects of the subsequent chapters and conclusion to the thesis.

Chapter 6: Home, food and health in the UK: This chapter reports the findings from research conducted in London. It concentrates on ‘Bengali’ food consumed at home. It looks at how ‘Bengali’ food serves to create home in the UK as well as maintain links with ‘back home’ in Bangladesh. The perceptions of Bengali food in terms of health are also explored in this chapter. Key generational differences in perceptions of food are examined, with the content in this chapter contributing primarily towards addressing research question 3 (what is the impact of these global links at a local level?) and research question 4 (what is the nature of knowledge transfer across generations?). By looking at lay perceptions of what comprises ‘healthy’ food, this chapter examines how food and health are constructed, and thereby contributes towards understandings of the food-medicine overlap (addressing research question 1: what is the nature of the food medicine overlap?), which is explored in greater depth in the subsequent chapter.

Chapter 7: Plants and food in Londoni homes in Sylhet: This chapter describes the food-plant-medicine-scape in the homes of women residing in Sylhet who have family in the UK. It explores the fluid nature of the food-medicine overlap and the conceptualisation of how items are classified as food, medicine and the space in between (addressing research question 1). It also looks at the impact of food and other items from the UK on households (research question 2). Additionally, the chapter explores generational changes and consistency occurring in the food-plant-medicine-scape of participants (research question 4).

Chapter 8: Conclusions: The different strands of the research are brought together in this final chapter. The thesis concludes by focusing on transnational gift exchange and inter-generational change and what this tells us about changes in health practices and beliefs. It highlights that exchanges between the UK and Bangladesh significantly impacts on the food-medicine-health-scapes in both places by embodying different perspectives and world-views. In the UK items (particularly ‘fresh’ food and vegetables) sent from Bangladesh are associated with rural landscapes, ‘Bengali’ food and ‘traditional’ medicine. Items sent from Bangladesh to the UK (such as bio-medicines and foods associated with pleasure) are reflective of modernity and modern medicine. However, while the exchanges are representative of differing perspectives, in practice the differing perspectives and world-views are complex, fluid and found both in the UK and Bangladesh. The research found pluralistic health and food practices and beliefs are present within homes both in the UK and Bangladesh; reinforced by different influences, exchanges and social fields. The participants in this

study interacted and engaged with multiple social fields. Through looking at inter-generational changes and consistencies in health and food-medicine-health practices it is possible to identify reasons for 'positive' well-being. This is particularly evident when comparing UK-based mothers and daughters, as daughters are able to better engage with multiple social-fields and have fewer barriers to health than their mothers. The thesis concludes that the ability to engage with different social fields and health-scapes are significant in being able to access services, overcome barriers to health and increase overall well being (labelled as 'health capital').

Before moving on in the dissertation it is important to highlight what is omitted from the thesis as well as defining and explaining some key words and concepts that are used throughout this work.

1.4 Omissions from the thesis: the focus on women

This research focused on food-plant practice among women. This was due to two key reasons. First, the outline of both the MINA project and the PhD was that the research should be conducted among Bengali women. Second; due to my gender and the nature of the research, when conducting research in homes and at community centres (at female groups) it was women that I had almost exclusive access to. While it is recognised that men are very influential in the home, this research and thesis focuses almost entirely on females, thus the practices of men and their knowledge are not explored in the thesis.

1.5 Definitions

Key terms used in this dissertation include:

***Desh* and *bidesh*:** Literally, *desh* means 'homeland' and *bidesh* means 'abroad' or away from home. When researching the British-Bengali 'social field', the discourse of *desh-bidesh* is commonly referred to. Gardener (1993) highlighted the ways the terms reflected meanings and discourses for those in Sylhet and in the UK. *Desh* referred to the land and home and was important for group identity, meaning and belonging for Sylhetis. *Bidesh* refers to foreign lands and a source of economic and political power. However, concepts of *desh-bidesh* are changing across people's life courses and generations (Gardner, 2002, Zeitlyn, 2013).

Bengali: The term 'Bengali' in this thesis refers to people who trace their origins back to the country now known as Bangladesh, formally East Pakistan (1947-1971) and previously East Bengal (and a part of Assam) in India. The term 'Bengali' is normally used to refer to the 'wider Bengal' which includes West Bengal in India as well as Bangladesh. I use 'Bengali' as opposed to 'Bangladeshi' as 'Bengali' (or 'Bangali') is the constructed identity adopted by the participants themselves. Identifying as Bengali, Bangladeshi, Muslim and British is complex and overlapping; an interesting debate on the topic was held at the 'Brick Lane circle' (2012)². The participants in this study also identified themselves as 'Sylheti'.

Sylheti: The term 'Sylheti' is used to describe people from Sylhet, northeast Bangladesh. 95% of Bengalis in the UK trace their origins to Sylhet (Brice, 2008). The district of Sylhet was established in 1782, as part of the 'Bengal' province: however in 1878 it was included in the newly created Assam province (Dasgupta, 2008, Alexander et al., 2010). On June the 3rd 1947, the Sylhet province voted in a referendum to join East Pakistan rather than India at partition³. The reasons they voted this way are complex and were not only on the grounds of religion (Chakrabarty, 2002, Dasgupta, 2008). However, it illustrates that historically Sylhet is somewhat distinct to the rest of Bangladesh. Sylhetis are also somewhat linguistically distinct to the rest of Bangladesh.

Sylheti language: Officially, 'Sylheti' is a dialect of Bangla; though some would argue it is a language in its own right (Zeitlyn, 2008). While *shuddo* Bangla (standard Bangla) is the language of education, literature and films, it is Sylheti that is spoken in people's homes. The picture is made more complex as the version of Sylheti spoken in London is different to that in Sylhet; Sylheti, as spoken particularly by young Sylhetis (most of whom do not speak standard Bangla) is often characterised as a 'fossilised' rural version of Sylheti (Zeitlyn, 2008).

Londoni: 'Londoni' is a term used in Sylhet to describe people who have migrated to the UK. It is also used to describe people who have family in the UK. The term is frequently used in academic research conducted in Sylhet (Gardner, 1993, Gardner, 1995 and Ahmed and Gardner, 2006 for example).

² The Brick Lane circle is a voluntary organisation primarily concerned with the British Bengali community. They organise various events, seminars and exhibitions. A session 'Are we Bengalis, Bangladeshis, Muslims or something else? Role of history in identity formation: a panel discussion' was held on 10th October 2012 as part of the third annual Bengal history week. It can be found on the website <http://www.bricklanecircle.org/>.

³ Sylhet, and the Northwest frontier in Pakistan, were the only two regions in the sub-continent given a referendum as to which country to join.

Scapes: The use of the suffix 'scape' is used in social science research to understand how humans and artefacts interact (Mikkelsen, 2011). The term 'scape' is applied to food and medicine throughout the research. As we live in an ever-changing world, 'scapes' attempt to capture the interconnected ways in which people and their environment interact (Brembeck and Johansson, 2010). For example, a 'food-scape' is a way of thinking not only about the actual sites where food is found, but also how food is interacted with, how this changes, and the multiple influences upon it.

Chapter Two: Literature Review

2.1 Overview and search strategy

The review of the literature provided here is from a collection of relevant literature gathered over the four years it took to complete the PhD. This review aims to provide a background for the PhD research, as well as highlight key arguments and relevant data. The relevance of multiple disciplines and study areas to this research was wide ranging and it was, at times, difficult to focus the literature review. Due to a lack of space and the large body of literature, it was not possible to delve into the literature in great depth, but rather give a broad overview of the literature. The review is divided into four main sections: 'Bengalis in the UK', 'food, health and migration', 'ethnobotanical studies' and 'Bangladesh: health and migration'. 'Bengalis in the UK' are explored first in this review, as this section provides background on the migration of Bengalis to the UK, which is a central theme of the thesis. The section also explores current academic concerns in social research, and health among this group. Regarding the health of Bengalis, statistical evidence was examined, particularly looking at diet-related diseases as they are most relevant to the study. Qualitative evidence into belief systems and health were also examined. The second section provides an overview of anthropological approaches to food and eating, as well as research into migration, health and diet. This section provides a context for the research conducted as part of the PhD. The third section looks at critiques of ethnobotanical research, the food-medicine overlap and reviews urban ethnobotanical research. The fourth section looks at Bangladesh in terms of health and migration from Sylhet to the UK. It provides an overview of general health indicators for Bangladesh before focusing on diet-related disease, as they are particularly relevant to the thesis. Also relevant to the thesis is the impact of migration to the UK on Sylhet, research examining this phenomena is reported. Finally, gaps in research are highlighted.

When looking for relevant studies, social science databases (JSTOR, IBSS), medical and scientific databases (Medline/PubMed, Embase), web-based databases, Google scholar and specific journals (BMJ, Journal of Ethnopharmacology) were searched. In addition, recommended literature by my supervisor and other academics were incorporated into the review. Important studies highlighted in literature reviewed were subsequently looked up. When searching for relevant books and book chapters, the databases at the School of Pharmacy, UCL and SOAS libraries, were searched. The literature review aims to provide a background to the PhD research, identify gaps and place in

context how the study addresses some of these gaps.

2.2 Bengalis in the UK

2.2.1 Background

The space inhabited by members of the Bengali diaspora has no fixed geographical, generational or cultural boundaries; rather, the lines are fluid and shifting as they are continuously being negotiated by individuals, communities, households and the state. The dynamic intertwining of host and sending country is important in the understanding of migrant communities (Gardner, 1995). This is certainly true in the Bengali British context as the links between Sylhet and Britain are longstanding and continue through the mutual exchange of material, social and cultural capital (Gardner, 2008). The food, plants and medicine consumed by this group need to be understood in this context as they are defined by British Bengalis and in turn serve to define them. It is also important to understand Bengalis in the UK and their movement from Sylhet in their historical context.

The flow of people from largely rural Sylhet to urban Britain is connected to the expansion of the Raj and trade and was maintained through a process of 'chain migration'. This movement can be traced back to the recruitment of *lascars* (seamen) from the region in the 19th century, to work on the merchant ships of the Raj, which continued into the 20th century (Adams, 1987). Some of these *lascars* jumped ship and settled in the UK. From the 1920s there was a small community of ex-*lascars* from Sylhet settled in east London (Choudhury, 1993). These early pioneers were important to setting up networks and facilitating later migration to the UK (Alexander et al., 2010). However, it was not until post-World War II that large numbers of Sylhetis started to work and settle in Britain. The 1960s and 1970s saw a continued flow of migration of men from Sylhet, mostly finding unskilled employment in factories, textiles and the growing 'Indian restaurant' industry. The process of 'chain migration' from Sylhet has been documented, as British-based Sylhetis assisted those based in Bangladesh to migrate through credit, arranging documents and places to stay (Gardner, 1995, Garbin, 2008). Migration up until this point had been essentially male and viewed as largely temporary. The 1970s and 1980s saw key changes to migration patterns due to political factors in both the UK and Bangladesh. In the UK, key changes to legislation meant that it became increasingly difficult to travel between the UK and the Indian sub-continent; as people were concerned about being able to reunite with family members they consequently brought them over (Ali, 2000,

Alexander et al., 2010). Bangladesh's war of Independence occurred in 1971; anxiety about the safety of family members, as well as the political and economic uncertainties that followed the war, meant that people increasingly settled and brought over family members. The significant numbers of wives and dependents joining the men throughout the 1970s and 1980s gave a sense of permanence to the community (Eade, 1997, Gardner, 2002). Little is known about recent migrants; transnational marriage continues to take place and, with most new migrants under the age of 45 (Alexander et al., 2010), it is likely they have come to work and study.

According to the 2011 census, there were 436,514 people identifying as 'British Bangladeshi' in England and Wales (0.8% of the population) (ONS, 2013). This is an increase of almost 50% from 2001, when the British Bengali population stood at 283,000 (Census, 2001). Over half of British Bengalis (222,000) are based in London, with the remaining population in other urban areas (Birmingham, Cardiff, Bradford, Oldham, to name a few). Almost 50% (212,000) were born in Bangladesh, though many have resided in the UK for decades. Eade divides Bengalis into three generations – the lascars who found work in manual occupations; the second generation who came as young children in the 1970s and the third generation who were 'born and bred in the east end' (Eade, 1997). While this broad overview of three distinct generations may be useful, in reality the boundaries between generations are not nearly as clearly defined. For example, Bengali children having one parent coming to the UK as a young child and another as an adult, and wives emigrating with teenage children from Bangladesh, do not fall into these neat generational categories (Zeitlyn, 2009). There is a small but significant body of social and health research specifically focusing on British Bengalis, discussed below.

2.2.2 Social research

Research into Bengalis in the UK, though somewhat limited, is varied. Social and ethnographic research provides important insight into the Bengali community. John Eade, most notably, has written extensively on British Bengalis, mostly in Tower Hamlets. The 'hybrid' identities of being 'British', 'Bangladeshi' and 'Muslim', particularly among younger generations, has been explored, though research on identity among elderly Bengalis is lacking (Gardner, 2002). An increasingly explored topic is the 'Islamisation' of space among Bengalis, again particularly among the younger generation (Eade, 1996, Eade et al., 2001, Glynn, 2002). Previously (throughout the 1960s, 1970s and 1980s), many Bengalis were vocal in the UK political sphere regarding the fight against racism, often engaging with a socialist, secular ideology that ran in parallel to events leading up to

Bangladesh's liberation war (Hussain, 2007, Garbin, 2008). Today, international networks are influenced more by the global Islamic struggle, with third-generation Bengalis no longer as connected to Bangladesh, and viewing its political system as highly corrupt (Glynn, 2002) and/or perceive the socialist ideologies of their fathers to have failed (Hussain, 2007). The 'British Muslim' identity is clearly linked with political events on the world stage, with the Rushdie affair and the first Gulf war impacting upon its development (Begum and Eade, 2005, Hussain, 2007); more recently, 9/11 and the subsequent invasions of Afghanistan and Iraq have served to further the cause of pockets of radicalisation (Begum and Eade, 2005), as well as leading many of the youth to re-examine Islam and its meaning (Glynn, 2002). At a local level there remain the daily problems of discrimination and seclusion for many segments of this community, with faith-based organisations significantly increased and providing highly valued safety nets (Glynn, 2002, Eade and Garbin, 2006) that, while filling an important space, serve to strengthen the Muslim identity and follow a set Islamic ideology. Though Bengali-ness remains a feature within the community, with cultural celebrations such as *Baishaki Mela* (Bangla New Year) being common, the 'Islamic-ness' of such occasions is debated (Eade and Garbin, 2006), and tensions remain. Both the global and local processes are crucial to the understanding of the British-Bengali-Muslim identity, and it must be remembered that boundaries between secularists and Islamists, and moderates and extremists, are rarely bounded but rather are fluid and highly contextual.

There have been several pieces of research recently, looking at British Bengali experiences of transnationalism (Zeitlyn, 2009, Mand, 2010, Gardner and Mand, 2012). The research challenges simplistic notions of home and away, finding there are often unclear ideas of what is meant by *desh* (home) and *bidesh* (abroad), and concepts of belonging are nuanced and complex (Mand, 2010, Gardner and Mand 2012, Zeitlyn, 2013). Mand and Gardner (2010), in looking at British Bengali children who travel to Sylhet with family, highlight how, for them, *desh* is experienced and perceived very differently from their parents. Zeitlyn (2013) argues that notions of *desh* and *bidesh* are less significant than previously, with British Bengalis being embedded in many transnational social fields (not only the British-Bengali one): examples include global Islam and Bollywood. He also highlights changes within and between home, school and community in London (Zeitlyn, 2010). Gardner (2002) revisits the concept of the *desh-bidesh* narrative among Bengali elders. She illustrates how perceptions of *desh* and *bidesh* are often contradictory, with gender, age, health and kinship all being important to their imaginings.

While the review does not have the space to delve into any great depth regarding the social research

among British Bengalis, the research illuminates the changing nature of the British Bengali 'community' and the fluid and changing meanings of *desh* and *bidesh*.

2.2.3 Social deprivation and education

Before examining health statistics and beliefs, education and social indicators among Bengalis in the UK will first be briefly examined. Poor indicators regarding socioeconomic deprivation may be at least in part responsible for the apparent poor health of British Bengalis.

Among Bengalis in Britain there do appear to be high levels of deprivation. For example, 50% of Bengali working households are below the poverty line compared to 9% of white families, and a reported 65% of Bengalis are living in poverty (Clark and Drinkwater, 2007). Additionally, there is reported to be very little upward social mobility compared to other groups (Smith et al., 2009). British Bengalis are reported to be the most highly socially-housed ethnic group, and the most likely to experience dissatisfaction with housing arrangements, with 55% living in social housing, and home ownership at 37% (Tackey et al., 2006). In 2002, they were the largest households with an average of 4.7 members (ONS, 2013). Additionally, they are under-represented in the labour market; in 2007, there was a reported 61% employment for Bengali males and 27% for Bengali females according to a national Labour Force Survey (ESDS, 2013). Education, language barriers, poor health and discrimination were all identified as key barriers to working (Takey et al., 2007). However, more than any other group, Bengalis were found to be reliant on self-employment for income (in cafes, restaurants, taxi companies, grocery shops, the media, etc) (Tackey et al., 2007); it is possible that not all self-employment is recorded and thus levels of employment may be slightly higher.

In terms of education and qualifications there are clear generational changes. In their analysis of data, Smith et al. (2008) found that among the first generation, 64% of Bengalis have no educational qualifications whereas among second generations only 21% have no educational qualification. This improvement is particularly evident among females, with an 83% increase in university applications from Bengali girls between 1994 and 1999 (Phillipson et al., 2003). In Tower Hamlets, where there is the highest concentration of Bengalis, there has been significant improvement, with Bengalis doing better educationally than their white counterparts (Phillipson et al., 2003).

2.2.4 Health status and beliefs

2.2.4.1 Statistics

The general health of Bengalis in the UK is reported as being worse than their white and other ethnic counterparts. Frequently mentioned statistics indicate that Bengalis are three to four times more likely to suffer from poor health than the general population (Census, 2001)⁴, are five times more likely to develop heart disease and diabetes (Nazroo, 1997, Gillam et al., 1998, Balarjara, 2005) and continue to have one of the highest rates of heart disease, as well as the highest age-standardised risk ratio for developing diabetes (Alam et al., 2012). When exploring statistics of Bengali health, the review focuses on the Health Survey for England 2004, and particularly diet-related disorders, as they are most relevant to this study. The statistics presented in the HSE (2004) were examined as it is the only study that has comprehensively looked at large numbers of data. It also separates groups according to age and sex. The Health Survey for England in 1999 and 2004 focused specifically on ethnic minorities and included a boosted sample of different minority groups, households being chosen at random and then from certain wards to increase numbers of participants from ethnic minorities (ONS, 2013). The survey included individual and household interviews, and height and weight measurements. For the six selected ethnic minority groups⁵, additional questions were asked, and various health measurements taken (such as waist-hip circumference, BP and blood tests). The large numbers of Bengali participants, comparisons to other ethnic groups, in-depth assessments and representative sample make this survey a reliable tool for evaluating the health of Bengalis and making comparisons with other groups.

Overall, in the HSE (2004) Bengalis were found to have twice the rate of self-reported poor or very poor general health, as compared to the general population. This could be related to socio-economic conditions and lack of social support (33% of Bengalis in the survey reported a lack of social support). The report itself linked having a long-standing illness to self-reported health. When looking at the breakdown of age and sex, older Bengali men (over 55) were the only group who had a significantly higher rate of long-standing illness than the general population. Bengali men over 55 were also the group most likely to report very poor or poor health among Bengalis in the sample. When looking at the breakdown of groups in this sample, there is an increase in rates of poor or very poor self-reported health according to age. For example, among females aged 16-24 rates of poor or very

⁴ A search was made for the latest census data (2011) regarding health and Bengalis. However, this information does not appear to be publically available yet.

⁵ The six selected ethnic groups were Black Caribbean, Indian, Pakistani, Bengali, Chinese and Irish.

poor self reported health are 5% (compared to 2% of the general population); in the age group 35-54 the rate is 27% (compared to 6% of the general population), and in the over 55 group it is 44% (compared to 12% of the general population). When examining data from the HSE (1998-2004), Smith et al. (2009) found that Bengalis were the only minority group explored that demonstrated significant intergenerational improvement in general health; four of the other groups had shown worse health in the second generation. It was suggested that this could be explained as the general health of Bengalis to start with was worse than all other groups; there was therefore far greater scope for improvement within the second generation (Smith et al., 2009). However, the improvement in health was substantial, and considering the apparent lack of upward mobility (Smith et al., 2009), this is unlikely to be the only explanation for such a marked intergenerational improvement in health.

Turning to diet-related disorders in the HSE, CVD conditions, obesity and type 2 diabetes were examined (ONS, 2013). The prevalence of CVD conditions (including stroke) was lower among Bengalis when all age groups are combined, compared to the general population. However, among the over 55 group, Bengali men were more likely to have experienced a heart attack than the general population (15.1% and 10.4% respectively) and a stroke (9.2% and 6.4% respectively); Bengali women above 55 were more likely to have experienced angina than the general population (12.7% and 8.7% respectively) and stroke (11.9% and 5.2% respectively), indicating higher rates of CVD in middle-aged and older Bengali adults compared to the general population. In terms of obesity (as defined by Body Mass Index), Bengali men had significantly lower rates across ages compared to the general population; they also had lower rates than the other ethnic groups. Bengali women's rates of obesity were similar to those of the general population. However, this data is flawed in that it does not apply the BMI (Body Mass Index) categories for overweight and obese that should be used for South Asians (WHO, 2004). The data also does not take into account the abdominal obesity levels of South Asians, which is known to be higher than the general population as indicated by greater waist circumference (HSE, 2004). This is important as higher levels of abdominal obesity substantially increase a person's susceptibility to CVD conditions and type 2 diabetes. Applying the WHO BMI criteria to the MINA sample indicated that there were high rates of obesity among Bengalis; 65% of mothers and 42.5% of daughters had BMI values indicating obesity (NDA, 2012). The waist circumference data confirmed high rates of abdominal obesity in the sample. However the MINA sample was much smaller than the HSE sample, and unlike the HSE was specific to one region.

The HSE data indicates consistently higher rates of type 2 diabetes for Bengalis than the general

population; this appears to be a common health issue for all the minority groups above 55, with the exception of Irish. Bengali men and women over the age of 55 have almost three times the rates of type 2 diabetes of the general population; among the 35-54 year age group it is also significantly higher. However, among those under 35, the data was inconclusive. A range of factors contribute to type 2 diabetes including socioeconomic status, unhealthy diet, low levels of physical activity and genetic factors (Alam et al., 2012). Turning to eating habits, the HSE found that fruit and vegetable consumption among Bengalis, though lower than the recommended amounts, was similar to the general population. Fat intake, too, was also similar to the general population and within the recommended limits.

The findings from the HSE illustrate that Bengalis do have significantly higher rates of poor self-reported health, though there is significant intergenerational improvement. Additionally, there are very high levels of type 2 diabetes among Bengali men and women over 35 years of age. It is therefore not surprising that a number of qualitative studies regarding perceptions of diabetes among Bengalis have been conducted (Greenhalgh et al., 1998, Greenhalgh et al., 2005, Grace et al., 2008, Chowdhury et al., 2000, Chowdhury et al., 2009).

2.2.4.2 Health beliefs and barriers

There have been several pieces of research exploring British Bengalis in the context of health and beliefs. Two qualitative research studies explored health systems and beliefs among Bengalis in Tower Hamlets (Eade, 1997, Dein et al., 2008). There have been two qualitative studies in the context of health in Cardiff; one investigating agency in decision-making regarding health and potential barriers (Hawthorne et al., 2007), the second examining genetics, Islam and identity (Rozario and Gilliat-Roy, 2007); both explore and give reference to 'alternative' views of health. Given the association of Bengalis with diabetes, it is not surprising there have been several studies regarding diabetes and Bengalis. Two studies in London explored diabetes in terms of health beliefs and attitudes (Greenhalgh et al., 1998, Grace et al., 2008). Research in London by Chowdhury et al. (2000) focused particularly on food beliefs. Greenhalgh et al. (2005) undertook action research looking at diabetes interventions, also in London, with a group of Bengali women unable to speak English. Chowdhury et al (2009) conducted qualitative research in Swansea and Birmingham with Bengali women, looking at health beliefs regarding diabetes.

Research looking at health beliefs and Bengalis has highlighted the presence of overlapping models

of belief including 'medical', 'folk' and 'Islam' (Eade, 1997, Dein et al., 2008). Rozario and Gilliat-Roy (2007), in their study of British Bengalis and disability, describe *daktari* (medical) and *upari* (supernatural) explanations for illness, though there were no sharp dividing lines; there is fluid movement between the modes of explanations for disability and sickness and consequent treatment. However, all were viewed as ultimately under Allah's control, regardless of the paths of treatment. Dein et al., (2008), in their study of psychiatric distress and models of explanation and treatment, found that travelling healers from India and Pakistan were often consulted, though many imams were highly sceptical of folk healers and they were often viewed as anti-Islamic and 'backwards'. Conflicts between 'modernity' and 'tradition', 'folk' and 'pure' Islam too were common. The increased 'Islamisation' of space permeated the dialogue. It was emphasised, too, that wider economic, social and cultural factors had a significant impact on beliefs and practices (Dein et al., 2008).

From this limited literature, there is little information on 'lay' practices regarding treatment and health, though the food studies regarding diabetes do provide information on lay eating habits. Grace et al. (2008) found a complementary relationship between Islam and a 'healthy lifestyle'. While the research by Hawthorne et al., (2007) found that dietary and health beliefs followed 'Western' concepts. Chowdhury et al., (2000), from in-depth research, found a distinctly Bengali food classification system emphasising balance and a relation to Ayurveda (though different to it). Foods were classified, by research participants, as 'strong' and 'weak', 'digestible' and 'indigestible', with different food groups being viewed as appropriate for the sick, the old, the weak and the strong. When looking at sources of information, friends and family networks were stressed as important sources of knowledge in the research conducted by Chowdhury et al., (2009) and Greenhalgh et al., (2005). In the action research conducted by Greenhalgh et al., (2005), in response to the preference for informal environments in which to discuss and learn about topics, an informal group was set up to provide a forum to exchange advice with positive results (a decrease in the mean glucose levels of long-term participants in the group).

When examining the practical and structural constraints to a healthy lifestyle and eating, a number of themes were highlighted. Both lay sources of information and professional advice were perceived as important (Greenhalgh et al., 1998, Hawthorne et al., 2007). For older Bengali women, a lack of fluency in English was a barrier to acquiring information and accessing health care services and advice (Greenhalgh et al., 1998, Greenhalgh et al., 2005, Grace et al., 2008, Chowdhury et al., 2009). Translators were not always adequate and family members (including children) were reported to be

relied upon to translate information (Chowdhury et al., 2009, Grace et al., 2008). The study by Grace et al., (2008) looked at lay as well as professional perceptions regarding diabetes advice; they found that professionals frequently faced barriers in communicating due to time pressures, difficulties with interpreters and a limited knowledge of the patients' culture. Practical and structural constraints were also reported as key barriers to adopting a 'healthy' lifestyle (Grace et al., 2008). Examples of such constraints include lack of time or money to find childcare when looking at participating in physical activity, the high prices of many Bengali fruit and vegetables and older Bengalis in particular not being familiar with cheaper, Western alternatives meaning intake of fruit and vegetables decreased (Grace et al., 2008). Hawthorne et al., (2007) found gender- and culture-specific issues among Bengali women that meant they were less likely to access services; examples include the 'protected' role of young married women, and meal times and schedules being governed by prayer times, school schedules and 'restaurant hours' (due to their husbands who worked there).

Hence these studies highlight the complex nature of health beliefs, as well as obstacles to accessing services and information. Older Bengali women appear to face additional barriers due to language constraints.

2.3 Food, medicine and health

2.3.1 Medical anthropology and medical pluralism

For the purpose of the study it is important to place in context how 'other' health care systems, medicine and food are conceptualised. Medical anthropologists, exercising their fascination with the 'exotic', have long researched medical systems in wide and varied cultural contexts, largely in the South. Historically, medical anthropologists have been criticised for concentrating on the *personalistic* or supernatural aspects of ethno-medical systems, often serving to further exoticise cultures and people different to ourselves (Waldstein and Adams, 2006). However, while these criticisms do continue, there is a wealth of medical anthropological literature that provides us with important insights into investigating health and healthcare systems in their wider socioeconomic-political-cultural context. A distinction between different aspects of ethno-medical systems was first made by Foster in 1976, when he identified the *personalistic* (magical, supernatural) and *naturalistic* (empirical) (Foster, 1976, Waldstein and Adams, 2006). Kleinmann (1980) theorises that healthcare systems across cultures are composed of three overlapping parts, namely the popular, the folk and

the professional sectors. The popular involves treatment by a lay person, the folk involves traditional/folk healers, whereas the professional includes specialists trained in formal medical schools (Kleinmann, 1980). Herbal medicine and medicinal plants may fall into any of these models. The advantages of this classification system, it is argued, allow researchers to define what they are investigating without denying the existence of the other domains of health (Waldstein and Adams, 2006).

When looking at medical pluralism, that is the coexistence of several medical systems, there are different schools of thought in what is an important area of debate within medical anthropology. According to some researchers, biomedicine and 'traditional' medicine are incompatible, with biomedicine frequently displacing 'traditional systems' (Foster and Anderson, 1978, Saethre, 2007). Other research has found different systems coexisting and even complementing each other (Etkin and Ross, 1982, Giovannini et al., 2011), while other research has emphasised a synergetic system where medical models influence (or 'assimilate' into) and change each other (Muela et al., 2002, Macfarlane and Alpers, 2009). Medical pluralism and the promotion of different systems are part of wider historical, social and political processes; for example, research in India has demonstrated how the promotion of biomedicine and 'indigenous' systems of medicine are the result of larger nationalist agendas (Khan, 2006). When looking at medical pluralism, it is crucial to view it in the local context.

2.3.2 Food, anthropology and migration

Currently, nutritional and biological approaches to food dominate popular discourse in relation to food. Nutritional and socio-biological approaches are concerned with optimising physiological survival within an ecological context (Lupton, 1996). Anthropologists have long argued that food is more complex than merely fulfilling biological needs; food serves to create social and political processes and illuminate symbolic meanings. The study of food has been approached from structuralist, symbolic and historical perspectives (Mintz and Bois, 2002). Influential anthropologists such as Claude Levi-Strauss and Mary Douglas have a structuralist perspective, which examines how one's actions, values and identities are structured through social norms which are connected to broader social structures (Mintz and Bois, 2002). In her renowned work, 'Deciphering the Meal', Douglas (1972) illustrated how the consumption of food could act as codes for social relations, and how food categories could mark boundaries; for example she viewed 'the meal' as a means of creating order and essentially as a microcosm of wider society. Structuralist approaches to food have

been criticised for being reductionist and often ignoring history (Lupton, 1996). Addressing this gap, Sidney Mintz wrote 'Sweetness and Power' (1986). Taking an historical perspective on sugar in British tastes, Mintz illustrated the role of global trade and slavery in transforming sugar and 'sweetness' from an elite taste to a commonly held taste (Mintz, 1986). This influential piece of work was critical to understanding the much wider socio-economic-political and historical processes of food, especially travelling food. Post-structuralists have stressed the interaction between food, embodiment and subjectivity (Lupton, 1996). Subjectivity is the understanding of self in relation to others and experiences; it recognises we are highly changeable and contextualised, within the broader context of our cultural and power relations. The symbolic and cultural meaning of food, and the boundaries it reinforces, can solidify group membership and set groups apart (Mintz and Bois, 2002). Turning to diaspora and food; cultural, symbolic, historical and socio-economic processes in food are important. Particularly relevant to my thesis is research looking at the changing role of food among groups who have immigrated to industrialised countries (such as the UK).

There is an interesting body of qualitative work from anthropologists and social geographers on food, health and the home among diasporic groups. Several studies highlight that food consumed every day is crucial to identity and home formations (Marte, 2008, Vallianatos and Raine, 2008, Codesal, 2008, Codesal, 2010). Food, through the cooking and preparation of food from one's home country, was also highlighted as a means of remembering home past (i.e. country of origin) (Ray, 2004, Dyck and Dossa, 2007, Marte, 2008, Codesal, 2008, Codesal, 2010). The importance of food in identities (both in home and host countries) is emphasised by several studies (Ray, 2004, Dyck, 2006, Dyck and Dossa, 2007, Vallianatos and Raine, 2008, Marte, 2008). For example, Vallianatos and Raine (2008), through their study on Arabic and South Asian immigrant women in Canada, draw attention to how gender and ethnic identities are negotiated through food. Marte (2008), in her study of Dominicans in New York, develops this theme beyond a means of nostalgia and identity but argues that food, too, is a form of communication and expression as well as a means of those cooking (primarily women) re-inscribing their migrant struggles in both home and host country. The visceral nature of food is stressed as being a particularly powerful means of embodying memories as well as connecting people and communities together (Codesal, 2008, Longhurst et al., 2012). Codesal (2008), in looking at Ecuadorians in Spain, demonstrates how food serves, through its smells and tastes, to embody memories from home as well as enhancing a sense of belonging and bringing people together. In her work comparing Ecuadorian food-ways in three places (New York, London and Santander) she demonstrates how the meanings of food are localised experiences; the socio-political conditions are important here, with immigration status and the presence or lack of

established food-ways being critical to the food found in each place (Codesal, 2010). Differences in the roles and meanings of food according to gender are highlighted by Ray (2004), Codesal (2008), Vallianatos and Raine (2008), Marte (2008) and Dyck (2006). There are also key differences according to generations, age and length of time in one's host country (Dyck 2006, Vallianatos and Raine, 2008). For example Vallianatos and Raine (2008), through their study on Arabic and South Asian immigrant women in Canada, highlight how differences in food habits between mothers and their children may play out, as there are reported to be key differences between preferences and perceptions of 'new' food and 'traditional' food. While identity, communities and gender are all important to what is eaten, Vallianatos and Raine (2008) stress the importance of wider social, political and economic challenges (for example, budgets and health concerns). The role of health in eating is explored by Dyck (2006) and Dyck and Dossa (2007), researching South Asian Sikhs and Afghan Muslims in British Columbia. Dyck (2006) explores how differing concepts of health (from different groups within and outside the home) are negotiated into the narratives of food, thus highlights the intricate relationship between body, food, place and identity. Similarly, Dyck and Dossa (2007) stress important symbolic as well as structural factors to negotiating food and health.

So how does the research discussed above relate to the work of this thesis? It illustrates the dynamic nature and complex roles of food; while crucial to identity and home formation, it is also embedded in wider socio-economic and transnational landscapes. Before moving on to other literature there are two pieces of work worth mentioning. One is that by sociologist Ray (2004), looking at middle-class families from West Bengal in New York City, and the other is ethnographic work conducted by Janeja (2010) in Kolkata, in West Bengal, and Dhaka. Ray (2004) examines the roles of 'insider' and 'outsider' food, the impact of globalisation and modernisation, and how food, as a constantly negotiated site, plays an important and shifting role in identity. Janeja's work is important as it highlights the everydayness and normality of Bengali food, demonstrating how it challenges and creates notions and constructions of Bengali food that vary according to class, religion and nationality (Janeja, 2010). Both pieces of research are different in context to my research, but they do highlight the importance of food in Bengali homes.

2.3.3 Pharmaceuticals

Medicine, like food, cannot be merely perceived through the biological model; it too must be understood in its wider cultural and socio-economic context. Pharmaceuticals are highly symbolic, encapsulating hope, healing and reaffirmation of belief in biomedicine, and the complex context of

the preparation, marketing, distribution and intake of medicines involves various actors and rituals during which process and values are inscribed and power relations negotiated (Geest et al., 1996). This is true of any type of medicine or herb within any type of medical system.

Beliefs and context are crucial to understanding medication-taking. When exploring pharmacy practice literature in the UK it is evident that the beliefs of individuals influence their decisions regarding taking medication, which are not always congruent with practitioners and the conventional biomedical model. Any medical information needs to pass through the filter of patients' 'lay' beliefs, often drawn upon from their own and families' experiences and advice (Stevenson, 2004). Research in Britain found that medicines were often viewed as 'damaging', 'unnatural' and, it was believed, doctors tended to over-prescribe (Stevenson, 2004), which in turn affected one's decision to take pharmaceutical, how much and how regularly. Sociologists stress the social context of medicine-taking and the patients' balancing of risks and benefits in the decision-making process (McGavock, 1996). The complex process of decision-making applies to the PhD research, as participants' beliefs around medication influences their health practices; the view of pharmaceuticals as 'unnatural' and 'unsafe' compared with more 'natural' remedies are particularly applicable. The need to look at the underlying belief systems is therefore essential in understanding medicines; when several models of belief may be drawn upon, it is all the more important. When exploring 'emic' perceptions in relation to medical systems, food and medicine, it is also important to remember that they are not static but changing according to time and place.

Thus far the review has discussed perceptions of medicine and food by individuals and society. In terms of the state, it is the regulation of such substances that is the concern. Across countries and differing bodies (such as the EU and WHO), the regulation, control and classification of herbal products is vastly different and the food-medicine overlap is a relevant theme; a plant may be defined as a food, functional food, supplement or herbal medicine and need to pass through various spaces to be regulated accordingly (Sahoo et al., 2010). As complementary and alternative medical (CAM) therapies are becoming increasingly global and growing in popularity, with calls for them to be publically funded in the UK, steps towards professionalisation and regularisation have been taken (Clarke et al., 2004), with issues of safety and efficacy being key concerns. However, this is highly problematic; as CAM therapies encompass a host of practices, from 'lay' home-based practices to highly structured therapies that involve years of training and have their own regulatory bodies. Regulation has advantages in increasing the profile and providing a level of protection to practitioners, freedom is also reduced (Clarke et al., 2004). However, the greater problem is perhaps

the difference in underlying philosophies as often regulation involves dealing with therapies, many of which do not have codified texts as they are oral traditions (Banerjee, 2004). There is little space here to discuss, in any depth, this incredibly complex set of issues. Currently, most herbal remedies in the UK are unlicensed as those that are not industrially produced are exempt from regulatory requirements, applicable to medicines holding a product licence or marketing authorisation according to section 12 of the Medicines Act 1968 (MHRA, 2010).

2.4 Ethnobotanical studies

2.4.1 Overview and critiques of ethnobotany

Ethnopharmacology and ethnobotany, as the names suggest, aim to incorporate people into the study of drugs and plants. People are key to understanding how plants work, and their inclusion has important wider repercussions, including important implications for property rights to knowledge, and the wider ecological, political and social contexts. However, critics argue that there continues to be a lack of trans-disciplinary research and that it is the ‘hard’ sciences that are given priority (Etkin and Elisabetsky, 2005). Etkin and Elisabetsky (2005) through citing retrospective studies of the *Journal of Ethnopharmacology*, demonstrate that an increasing number of articles are devoted to pharmacology and pharmacognosy, and only a small number to multi/inter-disciplinary research. Consequently they argue that “privileging bioscientific ideologies reproduces a Euro-American tradition that discounts ways of knowing and managing resources” (Etkin and Elisabetsky, 2005:24). This failure to integrate ethnography with pharmacology is a major criticism of ethnopharmacological research (Etkin and Elisabetsky, 2005, Waldstein, 2006). Waldstein (2006) states it is rare for ethnographic data on ethnomedicine to explore beyond uses, preparation and administration of medicines. Heinrich et al., (2009) argue that ethnopharmacological research must do more than merely describe local and traditional uses of medicines and should formulate clear hypotheses to be tested. They also suggest basic minimal methodological requirements in biology, anthropology, quantification of information and its analysis (Heinrich et al., 2009).

2.4.2 Food, medicine and ethnobotany

The blurring of food and medicine is not new; it is a common theme across multiple contexts and cultures. It was Hippocrates who famously stated “let your food be your medicine and your medicine be your food” (1480-377 BC proclamation, cited in Leonti, 2012:1295). Similarly, Ayurveda has taught the centrality of food to both health and healing (Caldecott, 2011). While the impact of diet and food continues to be recognised in research, food and medicine have largely been studied as two separate entities by academia (Pieroni and Price, 2006). However, several academics from the disciplines of ethnopharmacology, ethnobotany, anthropology and pharmacy have begun to address this dichotomy as they explore the food-medicine interface from various perspectives. Notably Etkin and Ross (1982), looking at medicinal plant use among the Hausa in Nigeria, found that 63 plants out of 235 were used as food as well as medicine; they stress the importance of both local contexts and the pharmacological properties of plants, and highlight the importance of bio-cultural adaptation in relation to what is consumed therapeutically (as food and medicine). Several other studies have explored both the pharmacological aspects of food-medicines as well as differing populations’ bio-cultural adaptations in a range of contexts (Owen and Johns, 2002, Owen, 2006, Pieroni and Quave, 2006, Grivetti, 2006). For example, Owen’s (2006) work examines the antioxidant content of Tibetan food and medicine in the context of high altitude nutrition physiology. Pieroni and Quaver’s (2006) research of wild plant consumption among Albanians and Italians in Southern Italy examines both classifications of food and medicine as well as pharmacological indications. Wild plants are categorised as food, medicine, functional food or food-medicines. While functional foods are perceived as ‘healthy’, food-medicines have clear medicinal indications. They suggest that high levels of antioxidants in these foods are important for the management of age-related disorders (Pieroni and Quave, 2006). Looking at the underlying beliefs regarding food-medicines, Quinlan and Quinlan (2006) explore how humoral theories are implicated in ‘bush medicine’ in Dominica, and in the classifications of food-medicine. Looking at food in a modern, industrialised context, Jauho and Niva (2013) explore lay beliefs concerning the increasingly popular and marketed ‘functional foods’. They find that consumers, while maintaining a degree of scepticism regarding ‘functional foods’, negotiate a place for functional foods as hybrids of food and medicine (Jauho and Niva, 2013). Heinrich et al., (2011) look at the health claims of the ‘super-food’ acai. They demonstrate how foods such as acai (*Euterpe oleracea* Martius.) often become popularised by the media and internet, with claims of having health therapeutic benefits but not always with the appropriate scientific backing (Heinrich et al., 2011). They also highlight the multiple and changing influences on classifications of food and medicine in a modern, globalised context.

The research above brings to light the various approaches that have been taken to researching the food-medicine interface, as well as the range of contexts and influences on classifications as food and/or medicine. When looking at food-medicine in the context of Bangladesh and her diaspora, there are few relevant studies. Among South Asians in Britain there have been a few urban ethnobotanical studies, all of which do reveal a significant food-medicine overlap with 'traditional' food (spices, vegetables) often being utilised therapeutically (Sandhu and Heinrich, 2005, Pieroni et al., 2007, Pieroni et al., 2010) (see section 2.4.3: urban ethnobotany review). Vegetables were reported to be frequently used in cooking, and were also viewed as medicinal (Sandhu and Heinrich, 2005, Pieroni and Torry, 2007, Pieroni et al., 2010). Taste was found to be an important factor in determining the medicinal nature of food, for example 'bitter' vegetables were believed to counteract sweetness and therefore could be used for diabetes (Pieroni et al., 2007, Pieroni and Torry, 2007). The study among Bengalis in the north of England (Pieroni et al., 2010) did not go into much detail regarding the food-medicine interface; however, Asian vegetables were found to be used medicinally in particular. In Bangladesh, there was one piece of research found conducted by Rahmatullah et al., (2012) examining 'functional foods'. Looking at different plants used by *kobiraji* (healers) in three different villages, plants advised to be consumed for preventative reasons (as opposed to curative purposes) were labelled 'functional foods' by the researchers. These 'functional food' were consumed for general nutrition, promotion of the health of different parts of the body (hair, eyes, memory, etc.), as blood purifiers as well as for the prevention of respiratory, hepatic and stomach disorders. The research did not go into very much depth as to why or how the practitioner viewed plants as food or medicine.

2.4.3 Urban ethnobotany review

While traditionally ethnobotanical research has focused on the remote corners of the globe, with the ambition of discovering 'miracle cures', there is indeed a wealth of knowledge as expressed by Pieroni and Vandebroek, "literally speaking in our own backyard" (2007:1). Exploring 'traditional' and 'alternative' medicines in our diverse societies is important for a number of reasons. As we aim to cater for the needs of all segments of society, it is vital to understand the health beliefs and means of managing illness of minority groups; this in term may impact on wider societies' health patterns. Ethnobotany can contribute greatly to this field. Since the 1990s there has been an increasing interest in 'urban ethnobotany' among diaspora communities in industrialised countries (Pieroni and Vandebroek, 2007). The body of research is relatively young and remains limited. There is less of an emphasis on miracle cures and drug discovery and more on the adaptation of knowledge and

medicinal practices. It is indeed a fascinating and important body of research, spanning the disciplines of ethnopharmacy, ethnobotany, transcultural health studies and medical anthropology. As the PhD research falls broadly under the category of 'urban ethnobotany', it is important to examine previous urban ethnobotanical research and identify lessons that can be learned from it.

The literature reviewed was all published within the past ten years and included twelve studies exploring primarily the use of plants for medicinal purposes among migrant communities in urban areas of Northern countries. Six of the studies were in the UK: two looking at South Asians in Bradford, one of which focused specifically on Mirpuris (Pieroni et al., 2008, Pieroni et al., 2007), one on the Sikh community in London (Sandhu and Heinrich, 2005), one of Turkish speaking Cypriots in London (Yoney et al., 2009), one looking at Bengalis in Bradford (Pieroni, 2010) one looking at Spanish-speaking Latinos in London (Ceuterick et al., 2007) and as part of this study Colombian practices were written about specifically (Ceuterick et al., 2008). There were four studies in the USA: two among Dominican immigrants in New York City (Ososki et al., 2007, Vandebroek et al., 2007) of which part of one study was also undertaken in the Dominican Republic (Ososki et al., 2007), and research from this study was first published in 2000 and was one of the original urban ethnobotany studies (Balick et al., 2000); of the remaining studies, one was carried out among South Asians in Connecticut (Palaniswamy, 2007), and one among Mexicans in Athens, Georgia (Waldstein, 2006). Additionally, there were studies exploring Turkish immigrants in Cologne, Germany (Pieroni et al., 2005), Thai women in Uppsala, Sweden (Lundberg, 2007) and Surinamese in Amsterdam, Holland (van Andel and Westers, 2010).

The study by Pieroni (2010) looking at Bengalis in Bradford is of particular interest to this research. Using interviews and focus group discussions, the study examined the use of herbal remedies among British Bengalis across a range of ages. It found that herbal medicines were preferred to biomedicines, with the NHS frequently being used as a last resort. This was largely due to communication problems and healthcare staff not understanding 'alternative' health strategies. Most of the medicinal plants reported as being used were found in Asian shops. Medicinal plants tended to be used more among older Bengalis and recent migrants. There is certainly overlap between the PhD research and this study, though the findings and focus are different.

A wide range of methods were employed by the studies; all of which, with one exception, employed multiple methods. The most frequently used method, used by ten of the studies, was semi-structured interviews. Other methods included free-listing, structured questionnaires, participant-

observation, open-ended interviews, focus group discussions, group interviews, collection of voucher specimens and botanical identification and cross-examination to existing literature.

While the application of 'traditional' medicine varies hugely across diaspora communities, common to all is that traditional and alternative medicines are actively used. While the studies may have some bias in terms of who is interviewed and the nature of the subjects, all the studies illustrate that 'traditional medicinal knowledge' among migrant communities is in no way 'dead' or even 'dying'. All the studies found that traditional medicines are used for a variety of purposes, often to treat specific ailments that fall under biomedical categories including a range of minor ailments, skin conditions, respiratory disorders and many others. Some illnesses are associated with communities and this is reflected in the studies; for example, South Asians have been shown to have a high prevalence of diabetes, and studies in the UK among Pakistanis, Sikhs and Bengalis found 'traditional' plants were used for the treatment and prevention of diabetes (Pieroni et al., 2007, Sandhu and Heinrich, 2005). 'Traditional' medicines may be used for conditions that people would not access a doctor for, such as minor ailments or taboo illnesses (i.e. psychological, or lice) or with a particular cultural relevance, for example coca and *panella* were found to be widely used within the Columbian community. Though not necessarily very 'effective', they were strongly and positively associated with their homeland (Ceuterick et al., 2008). Perhaps as expected, herbal medicines were also used for the treatment/prevention of illnesses that do not fall under strictly biomedical categories. For example, Pieroni et al (2005) found in their study of Turkish migrants in Germany that the *sideritis* species is used to treat the culturally unique syndrome 'worms in the eyes' which causes pain to eyes, ears and teeth. Van Andel and Wester (2010) also found, in their study of the Surinamese in Holland, that plant use is often related to culture-bound health beliefs and the prevention and maintenance of health.

A number of key themes do emerge from these studies. They include the overlap between food and medicine (Pieroni et al., 2008, Pieroni et al., 2007, Pieroni et al., 2005), and generational differences in knowledge and cultural adaptation. While several studies suggest that there are changes across generations (Pieroni et al., 2007, Sandhu and Heinrich, 2005, Yoney et al., 2009, Pieroni et al., 2005), this may be related to when one emigrates (Pieroni et al., 2007) and often uses are adapted (Pieroni et al., 2005); it is not often, therefore, a simple case of 'knowledge loss' across generations. Cultural adaptation is fascinating and is reflective of a community's identity and interaction with the host or other migrant communities; examples of how this is played out include beetroot diverted from its original use and being embedded in migrants' medicine (Pieroni et al., 2005), and the pharmaceutical

drug tylenol (acetaminophen) explained in terms of ‘hot’ and ‘cold’ properties (Waldstein, 2006).

As discussed previously (in section 2.4.1) criticisms of ethnopharmacy and ethnobotany include the lack of ethnography and trans-disciplinary approaches. However, from the studies examined, several have integrated the social sciences in terms of methods applied and researchers involved. A number of the studies are short and lack depth, often only touching upon themes or descriptive in terms of lists of medicinal use and preparation, with little analysis or explanation of ‘emic’ views of illness. This is not true of all the studies and a couple integrate detailed ethnography, thereby delving further into the beliefs and theories of use for substances (Waldstein, 2006, Lundberg, 2007), while two other studies followed up on previous studies in order to build and develop knowledge previously acquired (Pieroni et al., 2008, Ososki et al., 2007). There was very little cross-country comparison, with two exceptions; both these studies made comparisons across transnational landscapes (Ososki et al., 2007, Vandebroek et al., 2007). While this field of urban ethnobotany is small and relatively new, the start is promising; there are themes that are explored and developed in the thesis, most evidently transnational therapeutic landscapes and the food-medicine interface.

2.4.4 Bangladeshi ethnobotany studies

There have been several published ethnobotanical studies conducted in various villages throughout Bangladesh; most notably by Rahmatullah and colleagues (Rahmatullah et al., 2009, Rahmatullah et al., 2010, Mollik et al., 2010, Hossan et al., 2010, Rahmatullah et al., 2012a, Rahmatullah et al., 2013). The studies have concentrated on the knowledge of *kobiraji* (healers) and the plants they use as treatments. Several of the studies looked at minority groups in Bangladesh, such as the Santals (Rahman et al., 2010), the Khasia (Rahmatullah et al., 2013) and comparing seven different minority groups (Rahmatullah et al., 2012a). A couple of other studies have looked at minority groups’ use of medicinal plants, one in the Chittagong hill tracks (Khan and Manzoor, 2006) and one on the Shaija group (Halim et al., 2007). Other studies have concentrated on which plants are used to treat specific ailments such as urinary tract infections and sexually transmitted diseases (Hossan et al., 2010), and malaria (Rahmatullah et al., 2012). There has been a growing interest among NGOs as to medicinal plant use and a couple of reports produced outline what plants are commonly used medicinally (Halim et al., 2007, Sharmin, 2004). Most of these studies are concerned with what plants are used medicinally, as opposed to why⁶. However, the study by Mollik et al. (2010) looks at how *kobiraji* in different villages acquired their knowledge about medicinal plants. In the various

⁶ Rahmatullah and colleagues are collating their findings to create a database.

studies there is an emphasis on recording 'traditional knowledge' but little on the dynamics of how knowledge changes. The studies concentrate on practitioners' knowledge rather than 'lay' knowledge or practice. The only exception found is an interesting study on home gardens across Bangladesh, which focused on commonly grown plants used for personal and commercial purposes, including medicinal plants (Ali, 2005). This study highlighted that home gardens are integral to rural households providing income and food and that they are primarily managed by women and children.

Some of the studies have looked at how the 'traditional' uses of plants correspond with scientific studies (Rahmatullah et al., 2009, Rahmatullah et al., 2012). A few lab-based studies in Bangladesh have been carried out. They include looking at the anti-glycaemic effects of tamarind (commonly used against diabetes) (Roy et al., 2010); another study carried out in Dhaka university, was a pharmacological evaluation of 64 commonly used 'traditional medicinal' plants in Bangladesh, examined their anti-bacterial and anti-fungal activity (Rahman et al., 2001). The findings were that 33 of the plants demonstrated some activity and that they were consistent with folklore use. In addition, there have been several pieces of phytochemical research on Bengali plants, conducted by Strathclyde University in the UK in conjunction with Rajshahi University in Bangladesh (Anjuma et al., 2002, Sadika et al., 2003, Khatunea et al., 2004, Kaiser et al., 2011). While this research is interesting, it is very different to the PhD research and covers a very different area of plant research.

In terms of relevance to my research, there was no ethnobotanical literature on Sylhet, apart from one study looking at the Khasai ethnic group (Rahmatullah et al 2010). Additionally, there was a study that did look at 'functional food' to prevent certain diseases (Mollick et al., 2010). This study confirmed the existence of the food-medicine overlap in the Bangladesh context; a key theme explored in the PhD research.

2.5 Bangladesh: Health and migration

2.5.1 Health and health systems in Bangladesh

Existing studies on health in Bangladesh appear to be fairly dated and often concerned with the spiritual realm, psychiatry and childbirth (Blanchet, 1984, Karim, 1988, Goodburn et al., 1993, Miller, 1995, Wilce, 2004, Callan, 2008). While these studies may provide important insights it is important to acknowledge that the overemphasis of certain factors may reflect the researchers' own interest

and fascination with the 'exotic'. There has also been a considerable amount of research on diarrhoeal disease, most notably by ICDDR,B (International Centre for Diarrhoeal Diseases, Bangladesh), and on maternal and child nutrition (Streatfield, 2000). Recently, there has been a focus on Bangladesh's overall improvement in health (Chowdhury et al., 2013, Das and Horton, 2013, El-Saharty et al., 2013) as well as the increase in non-communicable diet related diseases (DGHS and MOHFW, 2007, Khan et al., 2011, El-Saharty et al., 2013).

2.5.1.1 Health Indicators and Non-Communicable Diseases

While Bangladesh remains one of the poorest countries in the world with 32% of the population living below the poverty line and the majority rural-based there have been significant improvements in terms of health indicators (WHO, 2006, El-Saharty et al., 2013). Frequently cited statistics include a rising life expectancy standing at 69, increased from 55 in 1980 (UNDP, 2013), a reduction of 40% in child mortality between the years of 1989 and 2006 (Khan et al., 2011), a decrease in the average number of children from 3.8 in 1994 to 2.4 in 2007 (Khan et al., 2011) as well as general improvements in maternal health, coverage of immunisations for childhood diseases and access to safe water and sanitation facilities (WHO, 2006, Khan et al., 2011). Recently the Lancet published a special issue series exploring the 'success' of Bangladesh in terms of its improving health indicators. It was stated that Bangladesh "has the longest life expectancy, the lowest total fertility rate, and the lowest infant and under-5 mortality rates in south Asia despite spending less on health care than several neighbouring countries" (Das and Horton, 2013:1681). Reasons given for the 'success' of Bangladesh in the series include the utilisation of pluralistic health systems and multiple stakeholders, the stress on women orientated highly focused health programmes deployed through community workers, government and NGO innovative health programmes being scaled up, as well as widespread and improved education and women's empowerment being stressed in development programmes (Chowdhury et al., 2013, Das and Horton, 2013). It should, however, be noted that there remains much room for improvement and there are significant differences in health according to socioeconomic status (Khan et al., 2011).

While the outlook for Bangladesh in terms of health indicators on the whole is positive, new challenges have emerged. Rapid urbanisation, changing diets and an aging population have contributed to an increase in diet-related non-communicable diseases (NCDs). While there is limited data on NCDs and diet-related diseases in Bangladesh, research done indicates it is an increasing issue. A study looking at age-standardised mortality due to chronic diseases among 23 low and

middle income countries ranked Bangladesh ninth⁷, primarily due to CVD and diabetes (Abegunde et al., 2007). Another study of 52 countries found that the average age of first heart attack in South Asia (including Bangladesh) was 53 years, six years younger than the rest of the world, due to high levels of diabetes and high cholesterol, low levels of physical activity and dietary factors (El-Saharty et al., 2013). Other statistics specific to Bangladesh include 68 percent of deaths in Bangladesh are accounted for due to NCDs and other chronic health conditions including old age complications (BBS, 2011) and about one-third of hospital admissions (to medical colleges) among those over 30 are were due to major NCDs (DGHS and MOHFW, 2007). While all these statistics point to a growing body of evidence regarding the increase of NCDs and diet-related diseases particularly, it should be noted that the burden of NCDs does vary across socioeconomic status, primarily affecting those with higher and middle incomes. For example, evidence suggests that the richest households have higher levels of blood pressure and diabetes (NIPORT et al., 2013). Furthermore, while NCDs and diet-related diseases disproportionately affect the elderly there is little evidence, particularly as these diseases have only recently been recognised as an issue, as to how this changes across generations. The increase of diet-related diseases in Bangladesh is particularly relevant to this research as the Bangladesh based-participants are primarily from a higher socio-economic group.

2.5.1.2 Health Belief Models

When exploring literature on medical models in Bangladesh it is difficult to distinguish clear boundaries between systems. 'Folk', 'Islamic' and '*daktari*/biomedical' models are all mentioned, as well as numerous healers. Gardner (1995) found during her fieldwork in Sylhet that healers would often employ many systems of health including Ayurveda, homeopathy and Muslim prayer, with the boundaries of herbal medicine, magic and Islamic healing blurred. According to Thomas (2006), healers can be divided into three broad categories. They are herbal-magical (*kobiraj*), magical (*ojha* or *fokir*), who invoke spiritual powers, and magical-religious (*mullah*), who are faith healers and employ Islamic and/or Unani healing. Healers are often linked to a 'folk' or 'mystic' Islam; a more purist form of Islam would reject such models though they would argue that Allah is ultimately in control (Gardner, 1995). Similarly, *daktari* or biomedical models would reject such practices also, presenting their model as more bounded (Wilce, 2004). The employment of different medical systems is affected by many factors including migration, status, class and religion, with many considering 'folk' practices as backward (Gardner, 1995, Wilce, 2004). However, it does appear that folk healers are widespread, and pluralistic beliefs and practices remain prevalent. A major gap in

⁷ Age standardised mortality was estimated at just under 800 per 100,000.

the literature is the lack of information on everyday 'lay' use of medicinal herbs and medicines in Bangladesh. Callan (2008), looking specifically at Sylhet, highlights how medical practices and beliefs are linked into wider social processes. In her ethnographic work looking at sorcery in Sylhet, she argues that migration (to the UK and other countries) has manifested the proliferation of sorcery (Callan 2008). The study illustrates how inequalities and context are critical in understanding how one's health and diagnosis may be impacted. For the research explored in this thesis, it is critical to understand the impact of migration on the locality as well as the different medical systems in Sylhet.

2.5.2 Migration and Sylhet

The impact of overseas migration to Bangladesh is evident through remittances. Siddique (2003) estimated that between 1976 and 2002, over three million Bengalis migrated overseas for employment. In 2003 the remittances stood at over three billion; this was 25% more than the earnings received from the ready-made garments industry and twice that of Bangladesh's aid budget (Siddique, 2005). Remittances from Sylhet specifically could not be found. While research from different disciplines has looked at migration from Sylhet to the UK (albeit somewhat indirectly), there has been little research on the impact of migration to the UK on Sylhet. A notable exception is the research carried out by Katy Gardner (Gardner 1993, Gardner 1995, Gardner 2008). In ethnographic research conducted in a Sylheti village in the late 1980s, Gardner links access to *bidesh* (abroad) to inequalities. She argues that it has both helped to create inequality and become a metaphor for thinking about inequalities, as access to *bidesh* means access to economic and social capital (Gardner 1995). More recently, upon returning to Sylhet Gardner explored the changing nature of migration to the UK, though she maintains that links with the UK continue to be important forms of cultural and social capital (Gardner 2008). While migration to the UK is very much a 'Sylheti phenomenon', other countries, particularly the Middle East as well as India, present opportunities to migrate, particularly for young men (Callan, 2008, Gardner, 2008). As outlined above, Callan (2008) too explored the impact of migration in Sylhet, though specifically as it related to sorcery. The impact of migration on Sylhet is a critical part of the PhD research; my dissertation will contribute a much-needed investigation of how migration to the UK specifically impacts the lives and homes of women in the region. Furthermore, the PhD research explores the impact of on-going links to Bangladesh on the Bengali diaspora in the UK.

2.6 Gaps in Research

There are several gaps in social, health and ethnobotanical research among Bengalis in the UK, some of which my PhD project will begin to address. In terms of social research, most focuses on younger and second-generation Bengalis. This research examines 'older' participants in particular, and differences and similarities across generations; considerations such as identity and symbolic meanings are addressed during the process of the research. While there appear to be changes in diet among younger Bengalis in Britain and an improvement in health, it is unclear why this is; the research looks at this and examines the important role of food from *desh*. In terms of ethnobotanical practice the research begins to address gaps in studies of 'lay' practices in terms of home and specifically plant-based treatments, building upon previous research on models of belief; this will be placed in the context of generations and transnational space. Importantly the PhD research contributes to the growing field of urban ethnobotany; while building on some of the themes raised in earlier research (the food-medicine interface, knowledge adaption) it will look more closely at the transnational and generational comparative landscapes and underlying belief systems in this context.

Chapter Three: Overall Approach and Methods

3.1 Overview of methods

In order to gain an in-depth understanding of the complex dynamics of migration and inter-generational knowledge in relation to medicinal and health plant-food knowledge, a primarily ethnographic, qualitative approach to the PhD project was adopted. An ethnographic qualitative approach allows one to explore such complex, and indeed fluid, interrelationships as lived meaningful experiences in a flexible manner. Strictly quantitative methods would be too limiting for the research intended, as highly structured interaction with research participants often yields data on a very limited, pre-defined section of local knowledge, serving to remove the people from the context (Martin, 2004). Given the nature of the PhD research it is impossible to restrict the understandings of highly dynamic lived realities to mere numbers. That is not to say the research is completely devoid of numbers; some basic descriptive statistics, where they illuminate findings, are generated, but the meanings behind these numbers are explored as opposed to exploring the meanings in terms of numbers.

Ethnography aims to give a holistic account of 'culture' as the researcher immerses one's self in the 'culture' and with the people they are studying. The characteristics of ethnographic research are that the researcher spends a substantial amount of time in the field concerned with how the individuals and group being studied understand the world (Denscombe, 2010), or 'the native's point of view' as it is commonly described. Ordinary and mundane events are considered just as valid as special ceremonies and events as ethnography strives to be a holistic study stressing processes, relationships and connections between various parts of a 'culture' or group (Denscombe, 2010, Neuman, 2006). There is an on-going debate on whether ethnography is a context-specific study of "rich and detailed descriptions of real life situations as they really are" that cannot be generalised, or if ethnography's purpose is to link in and test broad theoretical perspectives and events interpreted (Denscombe, 2010:67). I would view this research as context-specific; however, through examining other research and theories, it can add to an on-going body of knowledge. In other words the two views do not need to exclude each other. Clifford Geertz (1973) famously coined the phrase 'thick description', meaning a rich and detailed account of a 'culture' moving beyond 'thin' description (physical movements, places and events) and into the realm of meaning as ethnography attempts to understand and 'read' cultures or 'social actions' as 'texts'. Geertz focused on the need to read

social actions as 'texts' and the importance of symbols in order to find meaning (Geertz, 1973, Geertz, 1983). However it has been argued that by reading cultures as texts and concentrating on symbols the ethnographer often fails to link actions and symbols to the broader socio-political forces that influence and create them (Hoffman, 2009). It is vital that events are placed and viewed in context where power dynamics are examined, as expressed by Roseberry: "ask of any cultural text ... who is talking, what is being talked about, and what form of action is being called for" (1989:28). The role of the researcher in interpreting texts is important too, as there is the risk of over-reading, misreading and placing our own presuppositions and socio-cultural values onto the 'other'. The need for reflexivity, that is a sustained self-awareness and critique of the researcher's influence on research (Koch and Harrington, 1998), is essential.

When discussing ethnography and studying 'culture' the impression of a bounded people, group and culture is implied; this is not true of any people of any place or time, and certainly not of the mobile participant lives I explored during this piece of research. An ethnographic approach did allow me to engage in the lives of the people I was studying in a flexible manner. A range of methods were employed, several of which are more commonly associated with the fields of sociology and ethnobotany than with pure anthropological ethnography. The methods used included participant observation, semi-structured and informal interviews, focus group discussions, questionnaires as well as free-listing and collecting voucher specimens. While mixed methods were employed, the overall approach was ethnographic. The values and shortcomings of this approach will be discussed later in the chapter.

Having a testable hypothesis is common in quantitative research and less so in qualitative (Creswell, 2009, Whitely and Crawford, 2005). I decided not to start the research project with a clearly defined testable hypothesis since this would clearly limit the scope of the project. However the project did have four main research questions outlined in the introduction, allowing for some focus in the research. During the course of the project, these key questions were explored and refined, enabling the data to inform further data and build up theory.

3.2 Field sites

Due to the inter-connected history and on-going well-established links between Sylhet and London, these two locations were the main field sites of the research. Preliminary research was conducted in

Cardiff as a core part of the joint MINA research strategy. By conducting research in multiple sites I was able to explore transnational connections as they impacted differing localities. Spending time in both London and Sylhet enabled me to appreciate the differences and similarities between the two places and gain access to the inter-linked social sites.

Multi-sited research is a move away from the in-depth study of a bounded community associated with ethnographic research. Marcus (1995) wrote about the emergence of multi-sited ethnography as researchers 'follow' people, things, metaphors, stories, lives and conflicts. Hage (2005) warns against 'multi-sited' ethnography, explaining that it is not only physically draining but the terms 'imagined' communities and 'unifying' cultures, which are often used to justify such studies, are highly problematic. He argues that more about the effects of globalisation and migration can be found through an in-depth study in one location (Hage, 2005). Arguing in favour of multi-sited research, Fitzgerald (2006) says such research enables access to social networks across sites, adds an extra level of understanding to the influences, boundaries and domains of transnational networks. He advocates intensive research in multiple connected sites in order to be able to not only follow things and people as they move, but also to understand the influences and experiences of these movements (Fitzgerald, 2006). I concur with the view that while there are clearly difficulties and problems with multi-sited research it also allows, in my case, for exploration of connections between localities in greater depth; furthermore, while the idea of unifying cultures across the globe may be problematic, so too are the ideas of 'bounded' communities implied by single-site ethnographies. By dividing time between only two main research sites I was able to conduct intensive research in both places and examine the multiple influences of movement of people and plants.

3.3 Participants and sample

As the research is qualitative in nature, concentrating on familial networks with the aim of gaining in-depth knowledge, I did not have a large random sample of participants. This is acceptable for qualitative researchers as "it is the relevance to the research topic rather than their representativeness which determines the way in which people to be studied are selected" (Flick, 1998:41). The selection criteria for research participants were to be female, of Bengali origin, and aged over 16. In the UK, 'older' participants were aged over 45 and had migrated to the UK as adults. 'Younger' participants were the daughters or close relatives of older participants and had spent most of their lives in the UK (there was one exception of a 'daughter' who had migrated as an

adult). In Bangladesh the criterion in terms of age was the same as the UK, and mothers and daughters (or daughters-in-law) were selected. Participants interviewed and homes visited had immediate family in the UK; where possible, the families were interviewed or at least visited in the UK. Participants were identified via community centres and networks, and a snowballing sample was taken. Snowball sampling is an effective way of selecting cases within a network (Neuman, 2006). The MINA team using purposive sampling selected the participants in Cardiff. Purposive sampling is the technique of sampling where all the cases in a highly specific population are located (Neuman, 2006)⁸. I employed purposive sampling to identify some of the participants including those with high levels of knowledge about plant-medicines and Bengali women who worked on the allotments. These participants had interests in, and knowledge of, the issues explored in my research and provided important insights.

When calculating the overall number of participants, the numbers appear high (an estimated 130). However, there were many layers and levels of interaction with the participants; out of the 130, in-depth contact was made with fifty women through interviews and visits. In Cardiff there were thirty-nine participants who completed the questionnaires (fifty mother and daughter pairs, one additional daughter and eight mothers). In London contact was made with forty mostly 'older' Bengali women at two community centres⁹. From this number twelve took part in at least one of the three focus group discussions. Visits were also made to two gardening clubs and discussions were held with the participants and staff there. There was regular contact with around ten Bengali women on the city farm; consequently contact was made with some of their families. Three inter-generational households were visited on a regular basis (one of whom was initially contacted on the farm, another at a community centre, and the third through a relative in Bangladesh). The families in Bangladesh of two of these households were visited. Occasional visits were made to several other homes. In London eight formal interviews were organised, including two mother daughter pairs, one aunt and niece pair, and two additional 'older' participants. All but three of the interviewees' families in Bangladesh were also interviewed. In Bangladesh twelve formal interviews were conducted with four mother and daughter pairs and two mother in law and daughter in law pairs, depending on whom the participants lived with. Regular visits were made to five inter-generational Londoni homes, as well as several visits to additional homes. As part of the preliminary research, informal discussions were held with five groups of non-Londoni women (twenty-six women in total) about medicinal plants, as arranged by a local NGO. Meetings were held with three 'knowledgeable'

⁸ The sample was Bengali mother and daughter pairs in Cardiff; as Cardiff has a relatively small number of Bengalis all possible pairs were identified and selected.

⁹ There is more information on the community centres later in the chapter (section 3.4)

women about medicinal plants. In addition, visits and talks with people at various nurseries, seed shops and herbal medicine shops in the area were made.

Appendix 1 outlines the research participants interviewed profiles and their relations to each other. The research, particularly in the UK, was biased towards older participants. This was largely due to issues of access (younger women were busy with jobs and families and did not attend the community centres) and interests (in gardening for example). This did mean that the findings in London were slanted towards the perspectives of those who had migrated as adults to the UK. As migration is a key interest of the project this bias is not necessarily a weakness, however. The existence of younger family members and women in the UK sample did mean that the intergenerational exchange of knowledge could be explored. The class differences between the UK and Bangladesh were interesting. Generally the older UK-based participants belonged to lower socio-economic classes; they were often housewives whose husbands worked as manual unskilled labour, in the restaurant industry and menial jobs and many lived in council houses. There were of course exceptions: one of the participants in the FGD, a regular attendee of a community centre, is a doctor; another whom I interviewed works as a teacher. The younger participants, while belonging to this class, had mostly done well in school and were either still in college, looking for jobs or already had careers. Unlike their mothers (in most cases) and older relatives, they were highly literate. In Bangladesh most of the participants had benefitted from Londoni money (to differing degrees) and so did not belong to lower socioeconomic groups. When trying to assess wealth I completed a poverty scorecard for each household (Chen and Schreiner, 2009). All the households came well above the poverty line. Perhaps because of the wealth, as well as the improving education outputs in Bangladesh (Al-Samarrai, 2009), the daughters in contrast to their mothers were very well educated.¹⁰

3.4 Entry into the field and preliminary research

A thorough literature review and preliminary research are an important basis for a research project, providing background information and helping in developing the aims, objectives and methods (Smith, 2005). The goals of my preliminary research were to build up links with the community through discussions and observations, to explore background information and topics that would

¹⁰ All six of the daughters interviewed had attended school at least to the age of 16, and two of them were attending/had attended university.

inform subsequent research, in the process of which these aspects would be investigated in greater depth. The goals of the preliminary research phase were achieved once links with community members had been made and I was able to identify and build trust and rapport with future research participants. While the goals of the preliminary research were clear, the border between where the preliminary research ended and the 'real' research began was blurred.

Early on in my PhD I conducted my first piece of research for the PhD. With the rest of the MINA project I participated in the first MINA data collection event. Mother and daughter pairs from the Bengali community in Cardiff attended the daylong event, where they were interviewed and anthropometric measurements were taken by members of the MINA team and trained research assistants. The participants were asked to go to various 'stations' where they would take part in the data collection activities. The atmosphere was relaxed as participants mingled and food was provided. I had a 'station' that consisted of a table with various spices and plants, and the participants were invited to chat and to complete a questionnaire with me. The questionnaire was very basic, asking about knowledge, use and preparation of food-medicines. The initial event stimulated conversation and provided a snapshot of uses and perceptions of food-medicines among Bengali mothers and daughters. I participated in two subsequent MINA data collection events carrying out similar activities; the data generated provided some interesting comparisons with London.

London was the main focus of the research conducted in the UK. Rather than focusing on the hub of the Bengali community in East London, where the vast majority of research on Bengalis is conducted, I (in consultation with my supervisor) decided to approach community centres in North London where there are fewer Bengalis, though they still comprise a substantial ethnic group. I e-mailed and visited three community centres and agreed to regularly attend sessions at two of these community centres; the Shapla and Asha centres¹¹. At Shapla I 'volunteered' during their Monday morning sessions. The session was for 'older' women (that is, over 45), and the attendees were almost exclusively Bengali. Many were considered socially isolated and were recommended to attend by social workers or through word of mouth. Anywhere between ten and forty women would attend the sessions, averaging twenty-thirty per session depending on factors such as the time of year, the weather or festivities. Typically women would start arriving around 9.30am, an exercise session would begin around 10.30am lasting an hour, followed by a health or information session, and lunch was provided at 1pm. Bengali female workers (mostly, though not exclusively, British Sylheti)

¹¹ All names are pseudonyms

supervised or ran the sessions with someone from outside coming in to facilitate the exercise and sometimes the health sessions. A female Bengali (not Sylheti) doctor came every alternative week to provide medical advice and individual appointments. The women appeared to enjoy the sessions and would wait eagerly to see the doctor as well catch up on gossip with each other. The sessions were social as much as information sessions. At the Shapla centre I would help the workers set up, but spent most of my time observing and conversing with the women. I conducted pilot interviews here, and continued to attend the centre intermittently for two years while doing my research as a participant observer. I still visit occasionally. I was invited to the homes of some of the Shapla centre attendees and formally interviewed a few of the women (and their daughters) there.

At the Asha centre I regularly attended a 'health session' taking place on a Thursday morning lasting two hours. The sessions consisted of an hour of exercise, and an hour reserved for either an information session or more informal socialising. The session was specifically for 'older' Bengali women and was run by a Bengali woman from the Asha centre with the support of Camden council. One spring we started a 'gardening club' with this group of women, of whom three or four women attended for the five months of the scheme's duration (May-September 2010). Camden council organised a box for the group and we planted several vegetables, checking on them every week and then distributing the produce within the group. The group at the Asha centre was smaller and more intimate than the group I attended at the Shapla centre, providing a comfortable environment for the attendees to discuss issues in depth. Here I conducted the focus group discussions that helped to inform the design of the interview schedule. I continued to attend Asha for two years intermittently as a participant observer.

My involvement in networks in north London was an important aspect of my research. In addition, I conducted further research at a city farm in east London. When looking for existing Bengali gardening networks and more formal groups, east London was the most likely location. I visited a well-known gardening group run by and for Bengali women. I also visited a gardening group run at a GP's clinic where the attendees were primarily Bengali women. These provided insight into how such groups were organised and how gardening can be viewed as a 'healthy activity' that can and should be supported by organisations and the state. However, it was through personal contacts that I stumbled upon a city farm containing a number of allotment plots, the majority of which belonged to Bengalis. Throughout my PhD, I intermittently visited the farm, visiting on a weekly basis during two 'growing seasons'¹². Spending time with the allotment holders as well as observing the complex

¹² My regular visits were over the period of March-October 2010, and June-October 2011.

dynamics between the various groups on the farm provided fascinating insights into growing, gardening, space and the resulting political implications. As a regular visitor I conducted participant observation both on the farm and in the houses of some of the allotment holders.

While in the UK I visited community centres and organisations in order to gain access to the contacts I needed; in Bangladesh, it was primarily through personal interactions and contacts that I gained access to participants. Initially I spent some time at a NGO near Sylhet town. I attended some of their village group meetings (five in total) and asked them about food-medicines, which provided interesting background information. However, this group of women were different to my intended Londoni contacts. An added complication in Sylhet was that, unlike London, Sylhet is a much larger geographical space as it is a division not a city¹³. Therefore I decided to base myself in one location, a semi-rural location 5 km outside of Sylhet town which I will call 'Shobujpara' and visit Londonis in the area, whom I subsequently interviewed. Additionally where possible, contacts I had interviewed in London I attempted to contact in Sylhet (provided they were within an accessible travel range) and interview them, and upon returning to London I did the same. The various families I interviewed were visited several times in order to gain a greater insight into their lives and views.

3.5 Methods used

3.5.1 Participant observation

Participant observation, described by Bernard as "the foundation of cultural anthropology" involves immersing oneself into a 'culture' and intellectualising what has been seen and heard (Bernard, 2006:342). It is "the process enabling researchers to learn about the activities of the people under study in the natural setting through observing and participating in those activities" (Kawulich, 2005). 'Activities' include the ordinary and mundane as well as participating in events and ceremonies. Establishing rapport and engaging in conversations with participants are important aspects of participant observation. The observations are recorded in field notes which are later analysed (Bernard, 2006, Kawulich, 2005). Field notes are mostly descriptive notes, written soon after the interactions (normally at the end of the day when 'in the field'); methodological notes (means of collecting data) and analytic notes (analysis and making connections) are also important for field notes (Bernard 2006). The level of participation, and awareness in the community that they are

¹³ The total size of Sylhet division is 12,596 km²

being observed, will vary depending on researcher and study, from 'complete observer' to 'complete participant' (Kawulich, 2005). Kawulich (2005) states that the most ethical stance is to be an 'observer as a participant' as the researcher's motives are known but s/he is able to engage with participants. Performing a role in order to gain access to and learn about a community is not uncommon in ethnographic research; examples include Martin who, when following the metaphors of immunology for her ethnography 'Flexible Bodies: Tracking Immunity from the Days of Polio to the Days of AIDS', accessed various sites in different roles – an AIDS volunteer at one, a medical student at another and a corporate trainee at a third site (Martin, 1994) and Gardner who, for the purposes of her research among Bengali elders in East London, volunteered at a day care centre (Gardner, 2002). When working as a 'volunteer' I did make the participants and staff aware of my intentions and research. The ethical implications of access through various roles are discussed later in the chapter (section 3.9: ethics), as is the impact of differing roles' effects (section 3.8: challenges). Indeed, participant observation blurs the lines between the 'researcher' and the 'participant'; the 'insider' and the 'outsider', often resulting in increased insights and reflexivity, but also in ethical dilemmas which I discuss in greater detail later.

For the PhD I carried out participant observation in multiple sites spanning cities and continents in community centres, a city farm and peoples' homes and gardens. As the broad topics of my research were health, food, plants and medicine I attended spaces where I could discuss such issues with my target group. I therefore regularly attended two community centres in London (as described above) as well as the city farm. In Bangladesh, participant observation took place in the homes of people I visited (five regularly) as well as visiting seed shops, the market, and healers in Sylhet town.

In both the UK and Bangladesh I remained to some extent a distinct outsider due to my appearance, speech and, to varying degrees, age and education. However, these were not necessarily barriers. People tended to be intrigued by me and it was easy to start conversations; I was rarely viewed as a 'worker' at the community centres and so there were fewer expectations on the participants to say or do the 'right' thing. I found I had many things in common with the participants; I have family in both the UK and Bangladesh and, to some extent, see both as 'home', though in very different ways. This often proved to be fertile ground upon which we could strike up conversations.

Through being a participant observer I was able to access a range of participants and engage with them and learn about their lives and views in ways impossible through more structured interaction. While critics of participant observation argue that 'stand alone descriptions' alienate events from

context and cannot be generalised (Denscombe, 2010), I mitigated this through careful selection of participants and linking events in with a larger context. Furthermore, my research employed a range of methods (FGD, interviews, questionnaires), which assisted in focusing and validating my research. I discuss issues of validity and reliability later in the chapter (section 3.7).

3.5.2 Focus group discussions

The focus group discussions I conducted in London were invaluable in exploring ideas and perceptions of health, food, and plants with a group of Bengali women. As they were conducted early in the research they provided important background information. According to academic literature the purpose of a FGD is to explore attitudes, perceptions, feelings and ideas about a topic (Denscombe, 2010). Ideally involving between six and nine people and lasting up to two hours, there is a focus to the discussion, the interaction is noted, and the researcher will facilitate the discussion (Denscombe, 2010). The method has the underlying premise that the attitudes and beliefs of individuals are not formed in a vacuum but are influenced by those around them (Marshall and Rossman, 2010) allowing groups to explore processes which are jointly constructed (Culley et al., 2007). They are often more relaxed than a one-to-one interview (Marshall and Rossman, 2010), and encourage participation from those who may be reluctant to be interviewed alone (Culley et al., 2007). They allow the flexibility to explore different issues as they arise during the discussion, and are useful to gain access to a group and focus both the selection of a site and participants (Marshall and Rossman, 2010). However, there are also challenges to focus groups. There are practical difficulties in organisation, time-consuming transcriptions and analysis (Culley et al., 2007). However, with time and patience these can be overcome. More difficult to address are the potential for multiple power dynamics and group affects (Carey and Smith, 1994, Marshall and Rossman, 2010). This not only makes them difficult to facilitate but can also mean that not everyone will contribute to the discussion, and it is frequently the more dominant members whose views are heard. This can be mitigated by a skilled facilitator who encourages active participation from all; the use of other methods in addition to FGDs can also help to check and validate the findings of focus groups (Denscombe, 2010). Drawing on their own work researching infertility among South Asians in the UK, Culley et al., (2007) discuss the methodological implications of focus groups with minority communities. They stress the importance of familiarity with the language and culture of the group being studied, ideally the facilitator not having to rely on translators. They reject the idea of 'ethnic matching' of facilitator to the group studied as "bilingual and ethnic identities are complicated by class and gender and generational differences" (Culley et al., 2007:106). However, it is important to

be aware of differences and sensitive to them; for example, it may be appropriate to have single sex generational groups (Culley et al., 2007). These principles of difference between researcher and participant and cultural sensitivity apply to all aspects of my research methods.

For my PhD research I conducted three FGDs in London. Each focus group discussion had a different theme. The themes were '(Bengali) women and health', 'food (good and bad) and plants' and 'life in the UK'¹⁴. The first two groups consisted of six women and the third four. For the first two groups a worker was present and in the final group two were present (neither of whom could speak Bangla). I had high hopes for the focus group discussions and they did prove an important aspect of the research, though they were not without challenges. Having the FGDs in a community centre proved distracting, as people came and went as they pleased. Translating (either a group member or I) for the additional worker(s), when asked to do so, also proved distracting. Additionally, several of the women would look to myself or the other workers for the 'right' answers, something I felt was perhaps exacerbated by the fact the discussion took place in a community centre. When this occurred I would explain that it was the group member's perceptions that I was interested in and/or say we could discuss this in detail after the group. This approach is recommended by Culley et al., (2007), who faced similar questioning. The conversations did tend to be dominated by one or two members or split into two or three simultaneous conversations. In order to mitigate this I tried to draw the women back to the central conversation and to include everyone in the discussion. Despite these many difficulties with the focus groups, interesting conversation and data were generated. Being conducted early on in my PhD, they helped provide a lot of background information and to inform an interview schedule that was later developed.

I had planned to conduct FGDs in Bangladesh. However, in practical terms this proved difficult. There were no obvious spaces for such groups and people were unfamiliar with the concept. I accompanied local NGO workers in visiting different community groups and had planned to conduct the FGDs there. Unfortunately these women did not fit the profile of my research participants, they drifted in and out of the groups, and there were up to twenty per group. I did spend three days visiting six different groups and recorded discussions I had with between one and twelve participants at a time on medicinal plants and health. While I cannot classify these discussions as focus groups I have incorporated the notes from them into my fieldwork and they contribute to the ethnographic backdrop of my work in Sylhet.

¹⁴ The list of topics discussed and questions asked at the focus group discussions are outlined in Appendix 2

3.5.3 Questionnaires

A questionnaire was used during the preliminary research in Cardiff. The questionnaire covered basic questions regarding plants consumed for therapeutic purposes. The tool was developed in order to gain a snapshot of the medicinal plants used among Bengalis in Cardiff; it was adapted from similar questionnaires used in previous research. These included: the questionnaire used for the Ethnomedica project, researching herbal traditions in the UK, at Kew Gardens (Kew-Gardens, 2003); the questionnaires used for projects at UCL School of Pharmacy including 'The use of spices, health foods and other botanicals within the Sikh community in London' (Sandhu and Heinrich, 2005) and 'The use of medicinal plants within the Gujarati Hindu community in the London borough of Redbridge' (Doshi, 2008).

For the questionnaire, the participants were asked to 'free list' the different plants they used medicinally and then asked details about them. The questions included on the questionnaire were: what plants do you use therapeutically? What is the purpose of each plant named? How are they prepared? Are the plants taken as food and/or medicines? What are your sources of knowledge? Are there any plants that you know but do not use? The questionnaire can be found in Appendix 3. The questions were kept simple in order to gain a broad overview of what was used and for what purposes. When completing the questionnaires, I both asked the questions and recorded the answers. This was done rather than asking the participants to fill out the questionnaires for two reasons. The first was that several of the participants were illiterate or semi-literate. The second reason was that it enabled me to converse directly with the participants and clarify anything I did not understand.

3.5.4 Interviews

The term interview covers a spectrum of interaction ranging from informal discussions to highly structured pre-determined interaction. During the fieldwork I conducted informal interviews and more structured semi-structured interviews. The informal interviews were in-depth interviews with people I met who were either knowledgeable about medicinal plants or could shed more light on other aspects of my research. These interactions were normally recorded by notes taken very soon after the event as they were not always pre-planned. Semi-structured interviews take less time and are more focused than unstructured interviews (Bernard, 2006). They follow an interview guide which identifies a list of issues with probes, however it is flexible and allows one to talk in depth about topics of interest (Denscombe, 2010). It is recommended that, when possible, interviews are

recorded and later transcribed in order for the content to be captured fully (Bernard, 2006). Bernard (2006) describes interviewing and research in general as a craft, one that needs to be practiced and refined by the researcher. Knowing when and how to probe the interviewee, making her feel comfortable, not asking threatening questions or asking questions in a threatening manner, and knowing how to jog the interviewee's memory, are all part of the art (Bernard, 2006). These were all skills I hope I developed throughout the research process. Having a rapport with the women I interviewed and making regular visits were both invaluable tools in being able to interview them effectively.

I systematically interviewed twenty women using a semi-structured schedule¹⁵. The interviews allowed me to gather more focused data on a pool of women who fit the criteria of my research. There were two interview schedules I developed (one used in the UK and one used in Bangladesh) covering five broad topics (health beliefs and practices; food; therapeutic plants; transnational ties and generational change). The schedules were informed by the preliminary research and focus group discussions, and by looking at questionnaires used for similar projects. Under each topic there were both open and closed questions. There were elements used in ethnobotany such as free-listing of medicinal plants. The schedules were piloted in both Bangladesh and the UK and adjusted accordingly. Through the pilots and interviews I also found that some general questions were not helpful. For example, the question 'what food do you normally eat?' was very broad and when asked interviewees would give blank looks and/or vague answers. Instead, asking what someone ate in the last day would provide more information. Also, I found asking what foods were given to different groups of people specifically (old, sick, young, pregnant) was a more useful exercise than asking how exactly food was classified.

The women whom I interviewed were selected as they were related to each other (as described earlier) and I was able to compare their responses to each other. The closed questions enabled me to gain some empirical data generating descriptive statistics. I will discuss in more detail this type of data analysis later in the chapter. The interviews generally did not take as long as I had anticipated (an average of half an hour, as opposed to the hour or more I had expected). When conducting the interviews, the women often answered the questions I asked without really elaborating. While not uncomfortable, the women generally wanted to complete the process. I would repeatedly visit several of the women and I found that after the interviews they would share additional relevant information.

¹⁵ The interview schedules used in Sylhet and London can be found in Appendix 4

3.5.5 Ethnobotanical methods

As my PhD project falls under the broad topic of 'ethnobotany' (albeit with a focus on the 'ethno' in the ethnobotany) basic botanical methods are important to my research. I discussed briefly, above, the use of 'free-listing' as part of the interviews conducted. Free-listing is the process of obtaining a list of local names for a topic of research enabling the researcher to find out not only the terms but the local categories for the topic (Martin, 2004). The order in which they are listed is also important as people tend to name the most significant ones first (Martin, 2004). I simply asked people to list the names and uses of medicinal plants they know; this tended not to be overly exhaustive but informed my research as to the commonly used and significant medicinal plants known at a household level in both Sylhet and London.

I also collected 'voucher specimens'. The collection of voucher specimens is recommended by Heinrich et al., (2009) as one of the minimum standard practices for any type of ethnopharmacological research and Martin (2004) refers to collection of plants as the most basic of skills in ethnobotany. Voucher specimens are important as they serve as permanent records of plants known to a community as well as functioning as specimens for determination (Martin 2004). Most of the plants named by my participants were fairly common and domestic species (due to the nature of my research). I did collect a sample of plants from Sylhet¹⁶. They were identified by a botanist at Dhaka University and deposited to the herbarium in UCL School of Pharmacy. The national herbarium in Dhaka was contacted and visited, however they showed little interest in me depositing my samples there.

3.6 Data analysis

Bernard (2006:452) concisely describes data analysis as "the search for patterns in data and for ideas that help to explain why those patterns are there in the first place". This is a painstaking and complex process, and can be overwhelming when faced with a pile of field notes, transcriptions and other such data. It is advised that researchers first familiarise or 'immerse' themselves in the data, then start to analyse the data through categorising and coding, and then interpret the data through the development of concepts and linking themes and finding patterns (Marshall and Rossman, 2010,

¹⁶ A full list of voucher specimens can be found in Appendix 5

Denscombe, 2010). As well as looking at general patterns it is important to explore discrepancies and alternative understandings when analysing data, in order to gain a better and more holistic understanding of the data and ensure reliability (Marshall and Rossman, 2010).

As forewarned I was indeed overwhelmed by my data and found the whole process messy and complicated. I analysed the Cardiff data, London data and Sylhet data separately. While the overall approach was qualitative, the questionnaire conducted in Cardiff did produce some results that could be quantified. The results from the Cardiff questionnaires were exploratory, and the purpose was to identify key patterns and themes as well as to compare differences in plant use and knowledge between generations. In order to assist with this analysis I used the statistical software SPSS. I created a database from the results from the Cardiff questionnaires. In addition to the information from 34 participants in Cardiff I added data from 17 participants from the London sample, who also provided information regarding medicinal plant use, in order to boost the sample. Using SPSS, from the database I was able to generate descriptive statistics regarding the most commonly used food-plants, the differing reasons for their use, plants that are used for food, medicine and both, as well as sources of knowledge. I was also able to examine generational differences within these categories. This gave a clear overview of the different themes looked at in the thesis as well as the changes between generations. The discussions held regarding the different plants, and themes raised were summarised and incorporated into the analysis. Due to the small sample size and the non-random nature of the sample I did not attempt to do any statistical analysis. The numbers were merely a tool in the overall picture and helped to illustrate and understand the overall concepts.

The analysis of the data generated through the interviews, focus groups and participant observation was far more time consuming and complex than the descriptive statistical data. After spending time 'immersing' myself in the data (through reading, re-reading and highlighting interesting quotes and points raised in the data) I brought some order to the data through the use of software (Hyper-research). This enabled me to upload the transcripts and field notes onto one site, label themes and jump from one area to another. After labelling themes, codes and sub-themes I was able to build up concepts and theories. Though I say 'after' this is not strictly true, as I found myself jumping back and forth between themes and theories and the process was rarely linear.

Practically, through the assistance of Hyper-research I divided the scripts from the transcribed interviews, field notes and focus group discussions into three categories: London, Sylhet and supply chains. With the interviews I assigned codes (related to themes and sub-themes) to each part of the

transcripts. By having key questions I was able to bring some focus to my analysis by concentrating on those areas specifically¹⁷. I trawled through the field notes and focus group discussion transcripts, drawing out sections that were related to specific themes and key questions. The different themes that arose were divided into sections; the quotes and information were collated, as was the information from the different families. Under each section I would look for and record similar themes and meanings, in order to build up an understanding of how the participants in the research understood the different aspects of the research. In addition I collated information about the different mother and daughter pairs in light of the different themes. I also created code maps for the different chapters in order to assist me in visualising the data and to look at how the themes related to each other (see Figure 1 for an example of a code map generated by Hyper-research). I would look for discrepancies in the data and differences in opinion between participants and explore why they were there, in order to gain a better and more meaningful understanding of the data. The information was gathered, explained, and thus the chapters to the thesis were written.

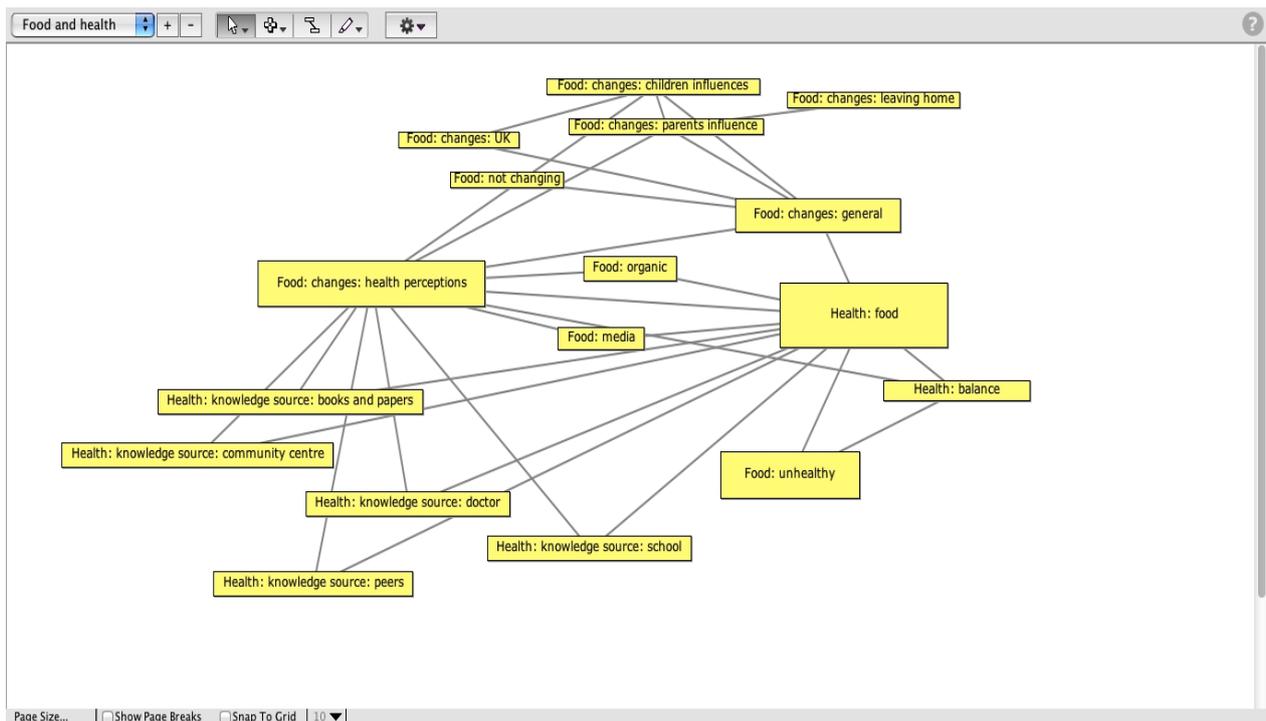


Figure 1: Example of a code map generated by Hyper-research

¹⁷ The chapters and corresponding key questions are outlined in the introduction.

3.7 Validity and reliability

Research that is valid means that the instruments of research, the data generated and the subsequent findings are both accurate and trustworthy (Bernard, 2006). Reliability in qualitative research refers to the consistency and the reproducibility of the responses or approach (Smith, 2005). As the research was primarily qualitative and ethnographic, it is according to criteria for this type of research that I have tried to ensure that my research is both valid and reliable. However, the questionnaire conducted during the preliminary stage of the research was more quantitative in nature. There are four key aspects to validity of quantitative research instruments: face validity (at face value does it make sense?), content validity (does it have the appropriate content for measuring the concept intended?), construct validity (is there a close fit between the construct that is being measured and actual observations of what is being measured?) and criterion validity (is there a close fit between the measures it produces and other instruments that are known to be valid?) (Smith, 2005, Bernard, 2006). For reliability it is important that the questions have reproducible results and are not, for example, ambiguous. When developing the instrument I considered the different types of validity. At face value, asking people in a straightforward manner what plants they use makes sense, increasing the face validity. The questionnaire asked people to 'free-list' plants, which is a well-established way of getting and measuring ethnobotanical information (Martin, 2004); it is also an appropriate means of measuring what plants are consumed and why (content validity). It is more difficult to assess the level of construct validity; however, my later observations in fieldwork did reflect several of the findings in the questionnaire. The questionnaire itself was developed from previously tested tools, which increases its criterion validity. Furthermore, as the questions were very basic, they were both easy to understand and to reproduce, meaning it was a reliable instrument. While not the most sophisticated tool, the questionnaire enabled me to gain an understanding of what the commonly used food plants were, and to make basic comparisons between groups.

Ethnographic research is often criticised for its lack of reliability due to the researcher's reliance on 'self' as a key research tool, making it difficult to both verify and replicate the process (Denscombe, 2010). Most social research does rely on the researcher interacting with those s/he is studying, though not to the same degree as ethnography. In ethnographic research the place of the researcher's 'self' is not only important but a key ingredient within the process of the research (Denscombe, 2010) as the researcher accepts that they are not an 'objective' observer but embrace and analyse their own subjectivity in the process. The process of analysing one's self (both emotions and actions) and the impact this has on analysing those s/he is studying is known as reflexivity

(Whitehead, 2005). It is therefore important not only to be aware and reflect upon the impact of oneself (identity, values and beliefs) but to acknowledge and explain this as part of the research reporting (Denscombe, 2010). Throughout the research period I tried to be reflective of myself and my interactions, and would report this when needed. Reflexivity is important in overcoming bias, not by taking oneself out of the equation but by acknowledging one's roles in the equation. My power as a researcher in representing those I research is something I am very aware of. James (2007) suggests the way to most accurately represent those being researched is to present and include as many direct quotes and raw data as possible; this way there is less chance of people's voices being misrepresented or over-read. I do try and do this in presenting the data along with the relevant background and context where necessary. This too will increase the validity of the data. Whiteman (2005) discusses a move away from a positivist approach to validity relying on rigid methodology but instead achieving 'emic validity'. Reflexivity, a creative and flexible approach to research, the use of multiple methods and detailed field notes increases 'emic validity'. Different measures were taken to increase the validity of each method used in the fieldwork. Furthermore, by employing a range of methods in my research I was able to cross-verify the information, thereby ensuring that my research overall was more reliable.

When carrying out individual interviews Smith (2005) says that it is important to examine issues that may make participants feel uncomfortable about sharing their true views, and not to be influenced by the researchers' preconceived views, in order to ensure reliability. These principles can also be applied to focus group discussions. Ensuring people are in a comfortable environment, building up a rapport and not asking leading questions were all important to achieving this. As suggested by Bernard (2006), my interview schedule was thought out, piloted and adjusted accordingly. When interviewing, if there was missing data or I was unsure about anything I would return to the person to find out the additional information. By following up on participants interviewed I found that I could fill in missing data, and often information that would not be shared with me initially would be shared with me at a later date. An example of this was one woman I interviewed in Sylhet (on our first meeting), who told me that she never used medicinal plants. This I believe was partly due to her son being present who repeatedly told me they had never used them. She also perceived the use of medicinal plants as 'backwards' and belonging to the past. However, when I visited her on many subsequent occasions she gradually told me about the different medicinal plants she had used and we had interesting discussions on her perceptions of medicinal plants. When carrying out fieldwork and participant observation, the need for detailed notes written soon after the event (descriptive and reflective) and then further analysis are essential for increased reliability (Whitehead, 2005,

Bernard, 2006). The context and theory behind field notes are critical to both the analysis and to increasing their validity.

The use of multiple methods and the triangulation of methods increases the accuracy and therefore the validity of data as findings can be checked against each other (Denscombe, 2010). For example, during fieldwork I visited many interviewees, which allowed me to talk in more depth about issues raised in the interviews and explore discrepancies between what was said and done (as the case above illustrates). Another example would be that of FGDs. The FGDs provided important insights into differing areas of research. I was able to further explore these areas in greater depth, and the accuracy of the perceptions among other participants during the interviews and fieldwork.

In summary, I ensured that my research was valid and reliable through a number of measures. They included reflecting on my role as a researcher throughout the research process. When conducting the research I strove to build relationships in order to make the participants feel comfortable and gain accurate information. I took detailed field notes and employed multiple research methods; this enabled me to cross-verify information. I continuously examined the data and would check any incomplete or unclear information. Finally, when recording the information I used direct quotes and raw data as much as possible.

3.8 Challenges

Real life research is often messy and complex and rarely goes exactly as planned; my research was no exception. Previously I discussed some of the issues regarding the different methodologies; I will now discuss the more practical challenges faced.

The research was conducted in three languages: Bangla, Sylheti and English. Bangla is the language spoken by most people from Bangladesh; Sylheti is spoken by the people of Sylhet and her diaspora. Whether Sylheti is a dialect of Bangla or a language in its own right is a subject of debate (Zeitlyn, 2008). The Sylheti spoken in the UK, as is the case with all living languages, has developed and taken on its own form and is distinct from the Sylheti spoken in Sylhet. The older research participants spoke this 'Londoni' Sylheti almost exclusively, though they generally understood standard Bangla. The younger participants spoke this form of Sylheti at home and to their parents, though they interacted in everyday life in English with people outside of the home (myself included). In Sylhet

most of the participants spoke Sylheti at home but would also speak standard Bangla; a few of the younger participants spoke English. English is my first language though I also speak standard Bangla. Through speaking Bangla I understood much of the spoken Sylheti, increasingly so throughout the research, and I took some lessons to improve my understanding. However, my lack of familiarity with Sylheti was a key challenge. I would try and check anything I did not understand, and I had the recorded interviews and FGDs where Sylheti was spoken checked by a Sylheti speaker. While this ensured I did not miss any key points, subtle nuances and modes of expression could well be missed.

Initial access to community members was not as difficult as I had been led to expect by some. The community centres I attended and the farm I visited were happy to have me there and I was genuinely touched by peoples' generosity in being invited into their homes. The physical distance between places I visited in London and the many miles and hours between London and Sylhet were obvious challenges. Having a schedule with regular sessions to attend as well as some flexibility in London helped to manage my time. Spending two six-month blocks in Sylhet helped me to concentrate on field work there, while having a break between the blocks enabled me to reflect on missing data and assess what else needed to be done. In London I could happily navigate around the various research sites and people understood that I lived there. In Bangladesh, this could have been more problematic had I been a single woman living alone. However, my long-standing connections with Bangladesh and living with my adopted *nani* (maternal grandmother) and her extended family were acceptable. I had lived in Sylhet as a small child and had been visiting my *nani's* family there for as long as I could remember. It is not uncommon for anthropologists and other researchers in the field to have adopted families which they develop long and lasting relationships with. My family in Sylhet are family in every sense of the word dating back to my childhood, they made my living in Sylhet an experience that made sense without the research to both myself and others around us, and as a consequence I did not face many of the challenges common to other field researchers (unfamiliarity with the place, food and people, 'culture shock' etc). However, by not coming from Sylhet or being ethnically Bengali I was not expected to conform to all the roles expected of many single women in Sylhet, the main one being that I was allowed the freedom to go out alone in the day. Ultimately I benefitted from belonging to a family while still being perceived as a *bideshi* (foreigner).

When in the community centres, being described as a 'volunteer' did give me a role that assuaged potential confusion about my presence purely as a researcher, though I did try to make a distinction between myself and other workers. In the UK when invited I would visit people's homes and I found

my role would make a transition from 'volunteer' to 'friend' or 'guest'. In Bangladesh, I did not have these formal social spaces to access people and instead I would visit 'Londonis' in the area. In these cases I would introduce myself as a 'researcher' and request to interview people. This provided an opening and a clear role for me. However, as an interviewer I was frequently asked whether the answer was 'correct' despite ensuring participants there was no 'right' or 'wrong' answer. As I returned to visit research participants my role frequently switched from 'interviewer/researcher' to 'friend/guest'. The multiple roles I had and was perceived to have (researcher, volunteer, worker, guest, friend) caused challenges and no doubt impacted on what was said to me. I tried to be as honest as possible about my research and to stress that I was not a worker at either the farms or the community centres, something that I thought may influence how they would describe or display, particularly, what may be viewed as 'healthy' or the need for a 'correct' answer. As a guest in homes people were generally comfortable and open and honest; however being a guest can also affect behaviour. An example of this is the food that is fed to a guest, and more specifically a foreign guest, which is quite different to that of a family member as an extract from my field notes illustrates:

"They said they thought I would not like rice - I assured them I did and ate it every day. They offered me some but were worried about it being hot, I again assured them I liked hot food but was full from the pasta. I ended up eating some though, it was delicious; tomato bharta (smashed tomatoes with chillies and mustard oil), shutki (dried fish), bindi baji (fried okra) and fish curry; I was glad I had not said before I was coming for a meal as I'm sure they would have tried to prepare meat and more fancy food."

So while each role comes with challenges and disadvantages, my changing role in itself has been an advantage. As a researcher/interviewer I had a place and a reason for doing what I did, as a guest in people's homes people felt more comfortable and would share information with me, and as a friend I could deepen this relationship and make unannounced visits to people's houses. I was thereby able to have access to different layers of information and check them against each other, giving a more holistic account of the research participants.

3.9 Ethics

Denscombe (2010) outlines three basic ethical expectations for social researchers. They are to respect the rights and dignity of research participants, to not cause them any harm and to operate honestly with integrity. The ethics of my research were considered throughout the PhD and, prior to conducting my research, I received ethical approval from The School of Pharmacy (see Appendix 6). The research did not focus on personally sensitive, politically contentious or potentially dangerous issues. When conducting research I was honest about my intentions and tried to be sensitive to my research participants' willingness to participate in the research. This was a process of continuous assessment and I did not push anyone to be involved in the research. Spending time in people's homes, and participant observation more generally, was by invitation. I did approach people to be interviewed but was careful not to be pushy. Generally people were happy to be interviewed; I would check with anyone accompanying me that it was ok for them to be present and whether they felt it ok for the interviewee to be interviewed. When conducting interviews and focus group discussions I requested permission to record the sessions and assured participants the transcripts would be anonymous. Gaining the informed consent of participants is important (Marshall and Rossman, 2010, Denscombe, 2010). People gave verbal consent. There are no written consent forms as many of my research participants are illiterate and the process of informed consent does change. I explained the purpose of my research and would only proceed if people agreed and appeared comfortable in doing so. When switching between roles of an 'interviewer', 'guest' and 'friend' particularly when observing people, the issue of informed consent became more problematic and blurred, particularly as I did not repeatedly explain my role (this would have been rather tiresome for both the participants and me). However the participants were aware of who I was and what I was doing and I stuck to the principles of honesty and causing no harm. The nature of my research meant I had no need to act 'under cover' and there were no incidences of my needing to directly intervene in situations as a result of something that was said. There were some more subtle ethical dilemmas that I encountered. During one of the interviews one of the research participants became tearful and upset when talking about her late parents and husband. I did not ask her many questions about them in order not to upset her further and her son came in to the interview and was able to comfort her; she later said she wanted to continue with the interview. I saw her on several subsequent occasions and there was no indication that she was in any way resentful or negatively impacted by the interview. There were several occasions when participants did share personal or sensitive information with me (not relevant to the research), where I ensured confidentiality and tried to be sensitive; there was nothing that warranted my intervention and none of this information forms part of my thesis.

As a researcher spending significant time in differing social spaces it is difficult not to be drawn into their dynamics and the differing perceptions of my role. For example, in the community centres I was often expected to 'teach' or promote healthy behaviour whereas, as a researcher, I did not see this as my role. I was often asked what the benefits and uses of plants 'actually are'; I was frequently deliberately vague so as to not bias their answers, or I would state some evidence but ask them what they thought and try to engage in a two-way conversation. The city farm with the allotments was intensely political. There were clear divisions and resentments on both sides (with several exceptions) between the Bengali allotment holders and the farm workers and volunteers. I did resist being drawn into these complex dynamics, described in more detail in subsequent sections of the thesis. I did listen to both sides, though I spent most of my time with the allotment holders. While sympathetic to the allotment holders I said little about my concerns to the farm workers as they were the gate holders and I wanted to know their side of the argument. It must be noted that there were several farm workers sympathetic to the allotment holders and those who actively stood up (and even resigned) for them and their rights to have space on the farm. When asked to come to the farm, one of the workers told me she felt work like mine was essential in bridging the gap between different communities and perhaps I could help them understand their workers more. This role as a 'bridge' or a 'mediator' was something I could have been more actively involved in; however, I felt it would distract me from the purpose of my research and/or, still worse, drag me into the complex political dynamics of the farm.

3.10 Final remarks on methods

As with all research, certain compromises were made with the methodology. The potentially subjective nature of the methods employed and small sample size, for instance, could be viewed as limitations. However, these compromises were not detrimental to the overall objectives of the research. Through employing in-depth qualitative research I was able to examine people's lives through the plants and food they exchange and consume.

Chapter Four: Preliminary Research: Therapeutic Plant Knowledge and Practice in Cardiff

4.1 Introduction

Early on in the PhD the first piece of research for the project was conducted (as discussed in the methods chapter). With the rest of the MINA project I participated in the first MINA data collection event. Mother and daughter pairs from the Bengali community in Cardiff attended the day-long event where they were interviewed and anthropometric measurements were taken. The participants were asked to go to various 'stations' where they would take part in data collection activities. I had a 'station' which consisted of a table with various plants where the participants were invited to chat and complete a questionnaire with me. The questionnaire was very basic, asking about knowledge, uses and preparation of food-medicines¹⁸. There were a total of three data collection events, during which time thirty-nine women completed the questionnaire. As part of the MINA project we (my supervisor and I) were expected to collect and share ethnobotanical data on the Cardiff-based participants from MINA. Given the limited time (three one-day events) we felt the questionnaire was the most appropriate research tool. The approach was a useful exploratory exercise enabling me to acquire basic information (a 'snapshot') about the ethnobotanical practices of Bengali women in Cardiff. The findings from Cardiff are outlined in this section of the thesis. In order to increase the sample size, data from fourteen London participants are also included in this section. The sample from London includes those participants who provided specific information regarding the plants they used therapeutically¹⁹ during interviews or participant observation.

While the Cardiff data is interesting there were many limitations to the approach; as a consequence we re-evaluated the direction and methods used as part of the project. The data generated from the events provided quantitative information regarding plants used therapeutically (names of plants, purpose, source of knowledge). The sample was neither large enough nor random enough to use for any meaningful statistical analysis. Furthermore, the issues and questions discussed in my PhD thesis can only be answered through a more qualitative approach. Given that I, as a researcher, was based in London and that London is the hub of the Bengali British population, it made sense to

¹⁸ See Appendix 3 for Cardiff questionnaire

¹⁹ i.e. the same information as the questionnaire that the Cardiff participants completed.

conduct the bulk of the PhD research in the UK in London. However, the research in Cardiff did raise some interesting points which were investigated in greater detail through the course of the PhD and which link into wider ethnobotanical theories.

The research presented in this chapter serves as an introduction to common food-plants used therapeutically, reasons why people may use the food plants, generational differences and similarities, and the food-medicine overlap. Before explaining the data generated it is important to first have some background information regarding the medical practices of participants in their homes.

4.2 Background: therapeutic practices at home

The therapeutic landscape of Bengali homes is varied, and pluralistic medical practices are not uncommon. Fieldwork in London and Cardiff suggests that women will treat minor ailments at home, the extent to which varies widely across individuals and families. Treatments are normally food-plants used as remedies or as food. Reasons for using them include that they are perceived as safe, they are readily available in shops and they have observed or been taught how to use these remedies. Most participants also reported going to the doctor (or pharmacist), either in addition or instead of treating themselves or others at home. While the doctor's advice was highly valued for many of the older women, there were both physical and language barriers in going to the doctor, which could be other reasons for using therapeutic food-plants. There were few reports of going to traditional or spiritual healers. If a spiritual healer was required then it would be for a spiritual problem, though this was frequently dismissed as superstition by many of the participants. However, prayer and the wearing of *tabiz* (amulet containing a prayer) for good health were not uncommon. According to the participants *kobiraj* (traditional healers) are rare in the UK. There were reports in Bangladesh of herbs and remedies being sent back to the UK from *kobiraj* there. There were occasional reports of homeopathy or Chinese medicine being used by participants or their relatives.

4.3 Participant profile and regional differences

The data explored in this section is from the thirty-four questionnaires²⁰ conducted at the MINA events in Cardiff and fourteen participants from London. The sample includes seventeen younger participants (daughters) and thirty-one older participants (mothers). There was a spread of ages in the sample with the highest percentages being in the 20-29 age range (27%, daughters) and the 50-59 age range (33%, mothers) (See figure 2).

The participants in Cardiff were recruited via the core-MINA project. This sample was a purposive one, as all the Bengali women in Cardiff were targeted. Therefore, in all likelihood, the sample is representative of the Bengali population in Cardiff. However, not all the women from the sample completed the questionnaire. It is likely that women who were interested in plants would have attended the station and completed the questionnaire. However, this is not necessarily a weakness as the purpose of the research was to find out about the nature of the plants used and the differences between various groups. The sample from London is smaller than the Cardiff one, as no questionnaire specifically on plants used as medicine was completed. The women from London, like the Cardiff sample, were likely to have some interest in medicinal plant use.

There were a slightly higher number of plants known and used in Cardiff than in London, though the difference is not great as table 1 indicates. The higher number of plants reported in Cardiff could be accounted for due to the nature of the questioning. In Cardiff the women were asked primarily about their medicinal plant use whereas in London it was in the context of broader questions about health. According to some Cardiff participants, there are more plants available from Bangladesh in London. However, there are an increasing number of 'Bengali' foods and vegetables available in Cardiff; while a couple of participants spoke about relatives bringing products from London (*Azadirachta indica*/neem and *Ocimum gratissimum*/rojat for instance), others reported that this is no longer necessary.

²⁰ Of the 39 questionnaires in Cardiff, five were incomplete and therefore excluded from the sample.

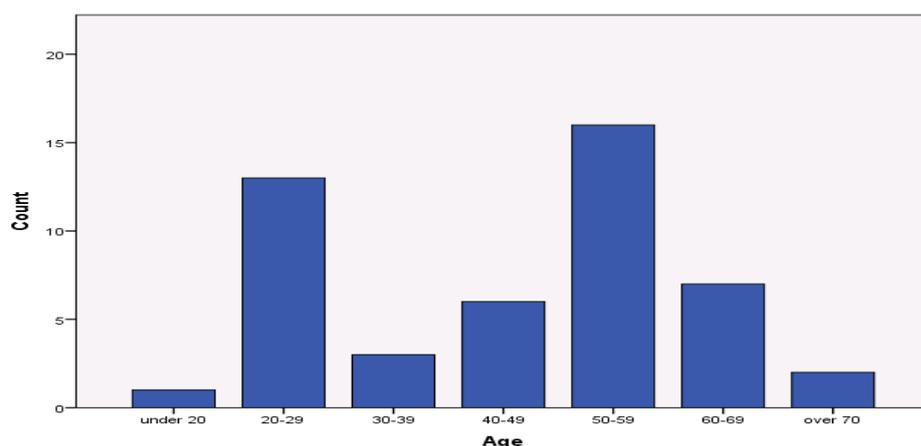


Figure 2: Age range of participants

Table 1: Average number of plants known and used in Cardiff and London

Place	Plants known	Plants used
Cardiff: Mean	4.35	3.5
Median	3	2.5
Mode	2	2
London: Mean	3.93	2.36
Median	2.5	2
Mode	2	2

4.4 Knowledge versus practice

Knowledge and practice are complex and distinct, but overlapping, terms that are often difficult to measure (Reyes-García et al., 2009). In their review of ethnobotanical studies and how knowledge is measured, Reyes-García et al., (2007) highlight the different types of knowledge and the differing theoretical and practical domains (i.e. knowledge versus practice). This research focuses on therapeutic plant knowledge at a household level. For the purpose of this chapter I measure knowledge and practice by number of plants known (knowledge) and number of plants used (practice). I could also measure knowledge and practice according to the number of remedies known and used, as both plants and remedies are recognised units of analysis (Reyes-García et al., 2009). The charts below (figure 3) illustrate the number of remedies and plants known and used according to individual participants. As they demonstrate, there is not a huge difference between

the two units of measurement. On scrutinising individual cases more closely, generally if someone knows several plants they also know several remedies. Likewise, if someone knows few plants they appear to know fewer remedies. The same principle applies for the use of plants and remedies. Therefore because the use and knowledge of plants and remedies do correlate it suggests that measuring them both is a relatively accurate measure of both knowledge and practice. For the purpose of this chapter however, I have chosen to focus on plants as opposed to remedies as I am interested in them not only as a measure of knowledge and practice but also in terms of how plants are acquired and their classifications as both food and medicine.

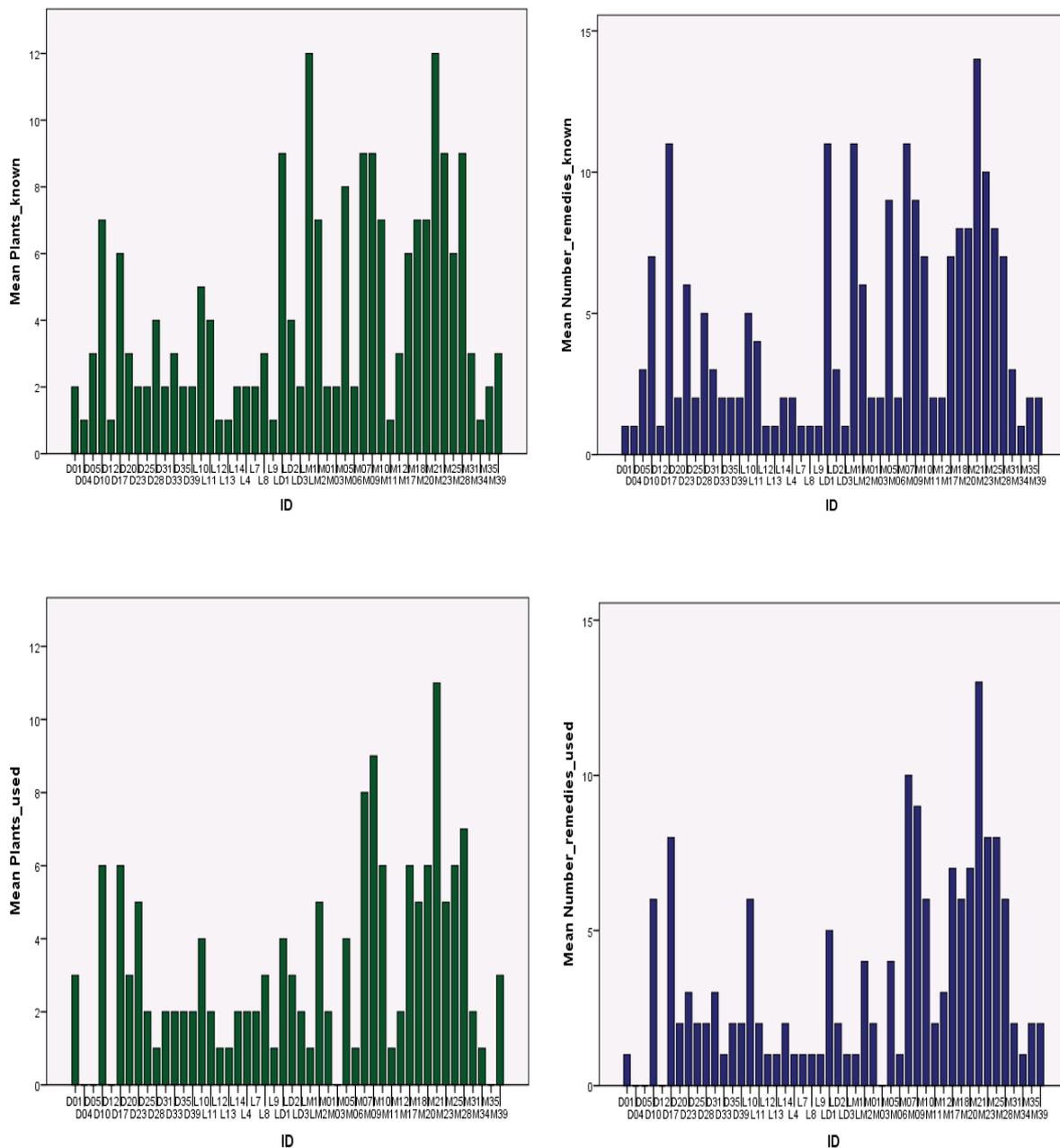


Figure 3: Plants and remedies known and used

4.5 Sources of knowledge

Several sources of medicinal plant knowledge were identified (see figure 4). The most frequently cited source of knowledge was the family (54% of participants), followed by networks. The networks included networks both in the UK (21% of participants) and in Bangladesh (15% of participants). Other sources included *kobiraj* or traditional healer (8%) in Bangladesh, a biomedical practitioner (6%), the media (4%), school (2%) and the beauty parlour (2%)²¹.

When the data is examined more closely it is apparent that there are variations in the sources of knowledge according to generation (see figure 5). With the older women the family is important, 52% identifying family as a source of knowledge. Networks in Bangladesh and the UK are also an important source of knowledge; 32% identify the community in the UK as a source of knowledge and 27% identify communities in Bangladesh as a source of knowledge. Other sources of knowledge include *kobiraj* (13%) and biomedical practitioners (7%). When talking to the participants in both Cardiff and in London, women did appear to associate much of their knowledge with Bangladesh. I was frequently told by older participants that "*in Bangladesh there are more plants*" or "*I would use this in Bangladesh but not here*". Family and friends include those in the UK and Bangladesh, but all have a link to Bangladesh. *Kobiraj* referred to are in Bangladesh. The biomedical practitioners referred to are also in Bangladesh. When examining the plants used, many are 'Bengali plants' and all of the plants (except one) are familiar to Bangladesh (see section 4.7). Thus while the source of knowledge and plants is metaphorically and physically speaking Bangladesh, on-going therapeutic plant practice is according to the active knowledge of friends and family as well as the availability of plants (see section 4.7).

Younger generations related their knowledge to their family and, more specifically, their mothers. This is reflected in the data, with 65% saying that their knowledge source is the family; other sources of knowledge include biomedical practitioners (6%), the beauty parlour (6%), the media (6%), and school (6%). The relation of medicinal plant knowledge to family (primarily in the UK) could be as home remedies for them are related to home here (as opposed to Bangladesh). Having not lived in Bangladesh, the younger participants have little reason to relate therapeutic plant knowledge to

²¹ The value is the percentage of participants that referred to the source of knowledge. As the numbers are small they are rounded up or down to the nearest percentage. Also several participants cited more than one source of knowledge, so the cumulative percentage is over 100%.

Bangladesh. Furthermore, as the daughters in this sample were generally not the main care-givers, they learned from their care-givers as opposed to actively seeking out knowledge. There was one participant in Cardiff who did have more knowledge and interest in medicinal plants than her mother. She reported researching this through books and the internet. There were a couple of other instances of advice being given to younger participants (outside of the home) regarding medicinal plant use; one was from the beauty parlour (regarding acne treatment) and the other from a pharmacist (regarding a cold). In both of these cases the participants asked for advice regarding a specific issue. I argue later in the thesis that ‘Bengali’ food, for younger participants, is generally associated with the home and the mother; this appears to be true of therapeutic plants as well. This argument is strengthened when looking at the breakdown of family knowledge according to generation. For the older generation, both parents are the main source of knowledge with grandparents and other relatives also being important. For the daughters it is primarily the mother. Fathers in addition to mothers are reported to pass down knowledge by three of the participants; aunts and sisters are mentioned by two participants. This illustrates the changing nature of knowledge. It is interesting that, for the younger generation, sources of knowledge tend to be female. It is unclear why this is, but I can speculate. If knowledge is associated with the home for younger participants, perhaps they have more interaction with their mothers and other female relatives; additionally, as the plants available are mostly food-plants these, again, are gendered. Where the older participants spoke about learning from male as well as female relatives, this could be due to a greater choice of plants in Bangladesh (not only plants of the home). Women in the UK are more likely to do the *bazarring* (shopping) and therefore have greater choice over what to bring back, including therapeutic food. We can draw no firm conclusions from this data but it is clear that the nature of sources of knowledge varies over time and space and across generations.

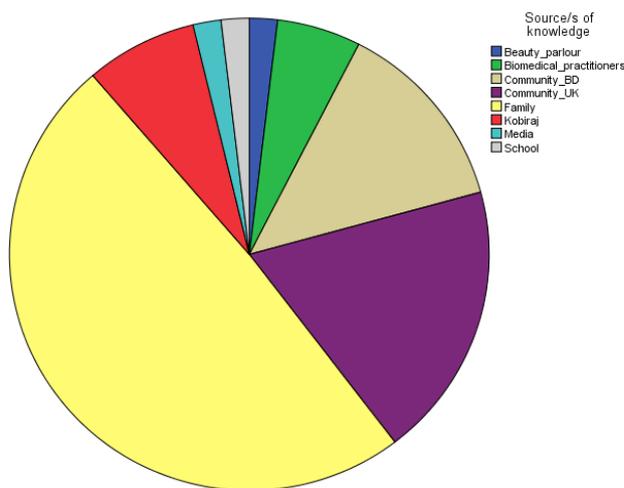


Figure 4: Sources of knowledge

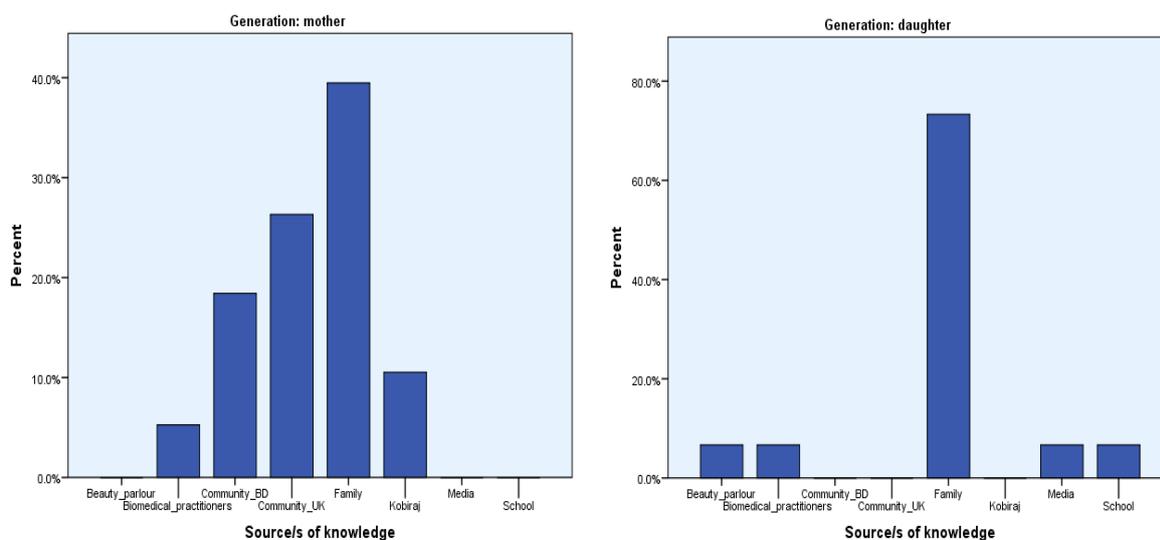


Figure 5: Sources of knowledge according to generation

4.6 Food and medicine

When conducting research it soon became evident that there was an overlap between food and medicine. Spices, vegetables and fruit were consumed interchangeably as food and medicine, depending on purpose and preparation. For example *korala* (*Momordica charantia*) is most commonly used to treat and help prevent diabetes. The fruit, taken raw, often with specific instructions (for example, on an empty stomach) is considered a medicine. *Korala* can also be cooked as food in *bajis* (fried with onions and spices) and curries. When taken as food, but to help with diabetes, we can see the boundaries beginning to blur. As a drink, it could be classed as a food, but the bitter, unpleasant taste of the drink means it would only be taken for medicinal purposes. Many of the plants consumed for diabetes were reported to be taken as food and medicine interchangeably (*neem/Azadirachta indica*, *tunimankuni/Centella asiatica*, *darchini/Cinnamomum verum* and *methi/Trigonella foenum-graecum* for example). Other examples include the numerous items drunk as teas (*darchini/Cinnamomum verum*, *lebu/Citrus limon* and *adda/Zingiber officinale*) but with the primary purpose of treating coughs and colds. Previous ethnobotanical studies have highlighted the overlap between food and medicine in a variety of contexts (Etkin and Ross, 1982, Pieroni and Vandebroek, 2007). Examples include wild food-plants used for multiple purposes in North-eastern Thailand (Price, 2006) and the increased marketing of ‘functional foods’ in the USA and UK (Jauho and Niva, 2013). Both the pharmacological and cultural aspects of food-plants in their

categorisation as food and/or medicine are important. Research more similar to the context of this research has found a clear food-medicine overlap in South Asian contexts in urban Britain, with 'traditional' food (spices, vegetables) often being utilised therapeutically (Sandhu and Heinrich, 2005, Pieroni et al., 2008, Pieroni et al., 2010).

When naming plants with medicinal purposes, the participants were asked if they were taken as food or medicine. Only 15% of the plant uses were reported as purely medicinal. Just over one-third of the responses (38.5%) were as both food and medicine. The highest number of responses was for food (47.5%). However, the 'food' had medicinal properties. When looking at the individual plants, all those reported to be used regularly (more than once) could be taken as both food and medicine depending on their purpose and on how they were ingested. The high number of plants consumed as both food and medicine and as food could in part be due to availability of these plants. This is discussed in greater detail in the subsequent section (section 4.7).

Table 2 provides a list of plants categorised either as food, medicine or food, and medicine. All the plants in the 'food' column of table 2 are consumed primarily as food even when taken for medicinal purposes. However, some of the plants may, in addition to being consumed as a food, be taken in a more medicinal form dependent on the purpose of its use. For example, *roshun* (*Allium sativum*) is recommended to be taken raw on an empty stomach when taken for BP. When taken like this it is strictly a medicine, though more commonly it is eaten as part of a meal. Unlike the strictly food-plants the plants in the 'food-medicine' category are unlikely to be eaten as food without any medicinal purpose. For example, neem (*Azadirachta indica*) is primarily a medicinal plant, but it is taken in multiple forms, including as food. *Korala* is not so straightforward, as it is primarily taken for diabetes often by itself in medicinal form; however it does occasionally form part of the dinner table. The plants in the medicine category include *henna* (*Lawsonia inermis*) and *gritikumari* (*Aloe vera*). *Lawsonia inermis* is the one plant on the list that is not edible. *Gritikumari* can be consumed as a drink, but is normally only for medicinal purposes. Very clearly, this list highlights the overlap between food and medicine. For both myself and the participants, it was difficult to divide the plants named into neat categories, and it was debatable which category several of the plants fell into.

Table 2: Plants used as food and medicine

Food (Plants used primarily as food but also therapeutic)	Food-medicine (Plants used primarily as medicine but also eaten as food)	Medicine (Plants taken as medicine, rarely consumed as food)
<i>Abelmoschus esculentus</i> (L.) Moench / <i>Bindi</i> <i>Allium sativum</i> L. / <i>Roshon</i> <i>Cicer arietinum</i> L. / <i>Chana</i> <i>Cinnamomum verum</i> J. Presl / <i>Darchini</i> <i>Citrus limon</i> (L.) Burm. f. / <i>Labu</i> <i>Corchorus olitorius</i> L. / <i>Nali shak</i> <i>Cocos nucifera</i> L. / <i>Narcal, dab</i> <i>Curcuma longa</i> L. / <i>Hollud</i> <i>Elettaria cardamomum</i> (L.) Maton / <i>Elachi</i> <i>Lablab purpureus</i> (L.) Sweet / <i>Uri</i> <i>Lens culinaris</i> Medik. / <i>Daal</i> <i>Mentha arvensis</i> L. / <i>Podmina</i> <i>Ocimum basilicum</i> L. / <i>Tulsi</i> <i>Trigonella foenum-graecum</i> L. / <i>Methi</i> <i>Zingiber officinale</i> Roscoe. / <i>Adda</i>	<i>Azadirachta indica</i> A.Juss / <i>Neem</i> <i>Centella asiatica</i> (L.) Urb. / <i>Tunimankuni</i> <i>Momordica charantia</i> L. / <i>Korala</i> <i>Nigella sativa</i> L / <i>Kaloo jeera</i> <i>Ocimum gratissimum</i> L./ <i>Rojat</i>	<i>Aloe vera</i> (L.) Burm.f. / <i>Gritikumari</i> <i>Lawsonia inermis</i> L. / <i>Henna</i>
Total: 15	Total: 6	Total: 2

4.7 Therapeutic plants use: what and why

The number of plants used is relatively small (25 named). However, there were several additional plants that were known about but not used (11 named). These plants are found in Bangladesh and difficult to acquire in the UK. An outline of all the plants and their uses and names is found in Appendix 7. These additional known plants are used for several ailments including general health, the heart, aches, coughs, colds and chicken pox. These conditions can be treated by other plants or by biomedical treatment which could account for their not being imported from Bangladesh.

Before scrutinising the reasons individual plants are used I will first briefly examine the reasons given by participants for their use of medicinal plants, and some of the underlying beliefs. When participants were asked ‘why a plant is medicinal’, apart from bemused looks the response was normally ‘because they work’ or they had been shown or taught it, as opposed to explaining an underlying reason. While many of the plants known about and used were common to Ayurvedic and Unani medicine, underlying perceptions of ‘hot’ and ‘cold’ were not referred to spontaneously. Taste had some impact on how a plant would be used, for example bitter plants were perceived to be

effective against diabetes. Spicy food was to be avoided in relation to stomach problems. It appears that, as with much 'lay knowledge', underlying belief systems are rarely referred to but are rather assumed. The argument of plants being used 'because they work', as opposed to a clear underlying rationale being referred to, is important as this research indicates that therapeutic plant use is a practical matter; it is due to both availability and being the most fitting item with which to treat someone.

The common use of therapeutic plants found in the kitchen is likely (at least in part) due to their high availability. This may also account for the high number of therapeutic plants consumed that can be categorised as both food and medicine. In order to examine whether plants found in the kitchen are likely to be used therapeutically, the reported plants used have been divided into three categories as shown in table 3. The categories are spices (commonly found in cooking), common food (vegetables, fruit and legumes) and 'other'. Plants that fall into the 'other' category are mostly edible, however they are not an everyday part of the Bengali British food-scape. Figure 6 illustrates how often each category was reported to be consumed medicinally; spices 42%, common food 38% and 'other' 20%. With spices and common kitchen food accounting for 80% of therapeutic plant use, the argument that the most available plants are more likely to be used therapeutically is persuasive. The availability of plants impacting on what is used therapeutically has been highlighted by other academics. Stepp and Moerman (2001), when examining the high number of 'weeds' in Mayan and Native North American medicinal flora, argue that medicinal plants that are widely used need to be both plentiful and accessible. Though the context of this research is very different to that of Stepp and Moerman (2001), a similar principle can be applied.

Figure 7 shows the number of citations for each individual plant. This illustrates how, while spices and vegetables and fruit are found frequently in the kitchen, the reported uses of the plants vary greatly. For example, the two plants with the highest frequency of uses (*lebu/Citrus limon* and *adda/Zingiber officinale*) are employed for the most common treatments (upper respiratory ailments). *Roshun (Allium sativum)*, an equally common spice, is used less frequently compared to *lebu* and *adda*. This is most likely due to its being used medicinally as cardiovascular treatment, which affects fewer people than do upper respiratory ailments. Other plants found commonly in the kitchen that have high reported uses (though fewer than *roshun*, *adda* and *lebu*) are those used primarily for diabetes (*korala/Momordica charantia*, *kalo jeera/Nigella sativa* and *methi/Trigonella foenum-graecum*), which affects many older Bengali women. Plant use according to category of illness will be discussed in greater detail later in the chapter (section 4.9).

It is clear that both availability and what plants are used for which treatment are important factors in therapeutic plant use. However, there are several plants cited in the 'other' category that are less available. By looking at why these plants in the 'other' category are used, we can start to unpick further reasons for medicinal plant use. The plants in the 'other' category are *gritikumari* (*Aloe vera*), neem (*Azadirachta indica*) *tunimankuni* (*Centella asiatica*), *henna* (*Lawsonia inermis*) and *rojat* (*Ocimum gratissimum*). Though not commonplace in the kitchen, both *gritikumari* and neem, like commonly used food plants (spices, vegetables and fruit) can be found in shops and have multiple uses. *Gritikumari* can also be grown easily. Due to its multiple uses (diabetes, general health tonic and skin), it was bought or grown by participants. Neem can be eaten as food in addition to having multiple therapeutic purposes (diabetes, pain, arthritis, blood pressure, toothache, allergies and gastrointestinal problems). It is brought over from Bangladesh and, perhaps due to its high demand, it is sold in a few shops in London and Cardiff. Its multiple therapeutic purposes and increased availability in the UK are likely to be reasons for its high number of citations (14 participants used it and 17 cited it). While neem and *gritikumari* are used for multiple purposes and are increasingly readily available, this is not true of the other plants in the 'other' category. *Henna*, though often found packaged as a beauty product, in its fresh form is difficult to procure. There was only one reported incidence of its use, in this case the participant had needed it for a relative with jaundice who was not responding well to biomedical treatment, and had gone through some effort to acquire it. *Naracal* (*Cocos nucifer*) juice was also only used by one participant. While commonplace in Bangladesh *naracal* is less frequently consumed by Bengalis in Britain, most likely due to its costs and lower availability. The participant who used it did so to lower her cholesterol. She reported that the medication she was taking to lower her cholesterol made her feel sick, and for this reason she took coconut water (*naracal/dab*) as an alternative. In both cases of the use of *henna* and *naracal* the participants used them when biomedical treatment was not working well and therefore looked elsewhere for alternatives. In these two instances, additional effort and/or expense was undertaken to acquire the plants required. *Tunimankuni* (*Centella asiatica*) and *rojat* (*Ocimum gratissimum*) are two items that are rare to both kitchens and shops in the UK. Both can be consumed as food but have specific purposes when consumed; *tunimankuni* for pains and stomach upsets, and *rojat* for the health of a mother after childbirth. The reported use of both plants was considerably lower than knowledge of the plants; both plants were cited six times as medicinal plants but only once each as actually used. It is likely that they are rarely used due to the practicalities of bringing them over from Bangladesh. Both participants who did cite using these two plants requested relatives to bring them over and used them when they could as opposed to using them regularly. These two plants also

illustrate that the use of medicinal plants may, in addition, be due to personal preference as only two participants requested that the plants be brought over. Overall, this 'other' group of plants illustrates several possible reasons for therapeutic plant use, including availability; when a plant has multiple uses (as in the case of *gritikumari* and neem); when biomedical or other treatment is not perceived as effective so an alternative is sought (as with *henna* and *naracal*), and due to personal preference (as with *tunimankuni* and *rojat*).

We can draw some preliminary conclusions as to why therapeutic plants are used. Above all it appears to be a pragmatic matter of availability. Those plants that are found commonly in the kitchen and shops are used frequently. Additionally, those plants that are used for multiple purposes tend to be used more. Plants may also be sought out (often with more effort) when biomedical treatment appears to be ineffective. Finally, personal preference for certain plants may also account for what is used. There are likely to be other reasons as to what plants are used and for what purposes, as the section on purposes of plant (section 4.9) illustrates. Moving beyond practicalities and preference, the high number of plants described as 'Bengali' plants implies that Bangladesh remains an important source of knowledge.

Table 3: Groups of therapeutic plants

Spices	Common food (Vegetables, fruit, legumes)	Other
<i>Allium sativum</i> L. / <i>Roshon</i> <i>Cinnamomum verum</i> J. Presl / <i>Darchini</i> <i>Curcuma longa</i> L. / <i>Hollud</i> <i>Mentha arvensis</i> L. / <i>Podmina</i> <i>Ocimum basilicum</i> L. / <i>Tulsi</i> <i>Trigonella foenum-graecum</i> L. / <i>Methi</i> <i>Zingiber officinale</i> Roscoe. / <i>Adda</i>	<i>Abelmoschus esculentus</i> (L.) Moench/ <i>Bindi</i> <i>Citrus limon</i> (L.) Burm. f. / <i>Labu</i> <i>Cicer arietinum</i> L. / <i>Chana</i> <i>Corchorus olitorous</i> L. / <i>Nali shak</i> <i>Lablab purpureus</i> (L.) / <i>Uri</i> <i>Lens culinaris</i> Medik. / <i>Daal</i> <i>Momordica charantia</i> L. / <i>Korala</i> <i>Nigella sativa</i> L. / <i>Kalo jeera</i> <i>Tamarindus indica</i> L. / <i>Tetul</i>	<i>Aloe vera</i> (L.) Burm.f. / <i>Gritikumari</i> <i>Azadirachta indica</i> A.Juss / Neem <i>Centella asiatica</i> (L.) Urb. / <i>Tunimankuni</i> <i>Cocos nucifera</i> L. / <i>Narcal, dab</i> <i>Lawsonia inermis</i> L. / <i>Henna</i> <i>Ocimum gratissimum</i> L. / <i>Rojat</i>
Total: 7	Total: 10	Total: 6

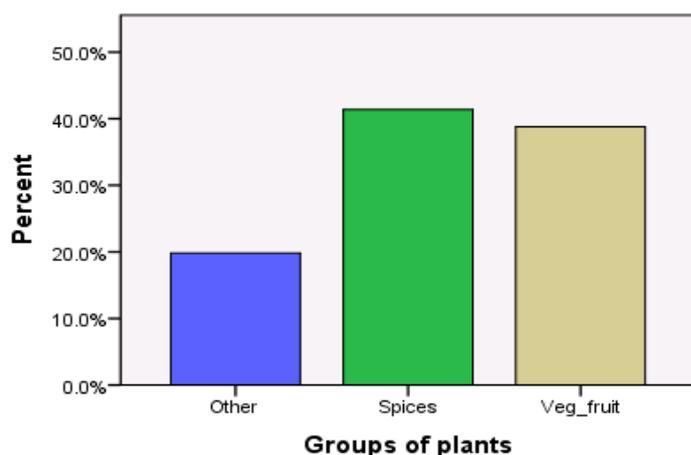


Figure 6: Plant citations according to group

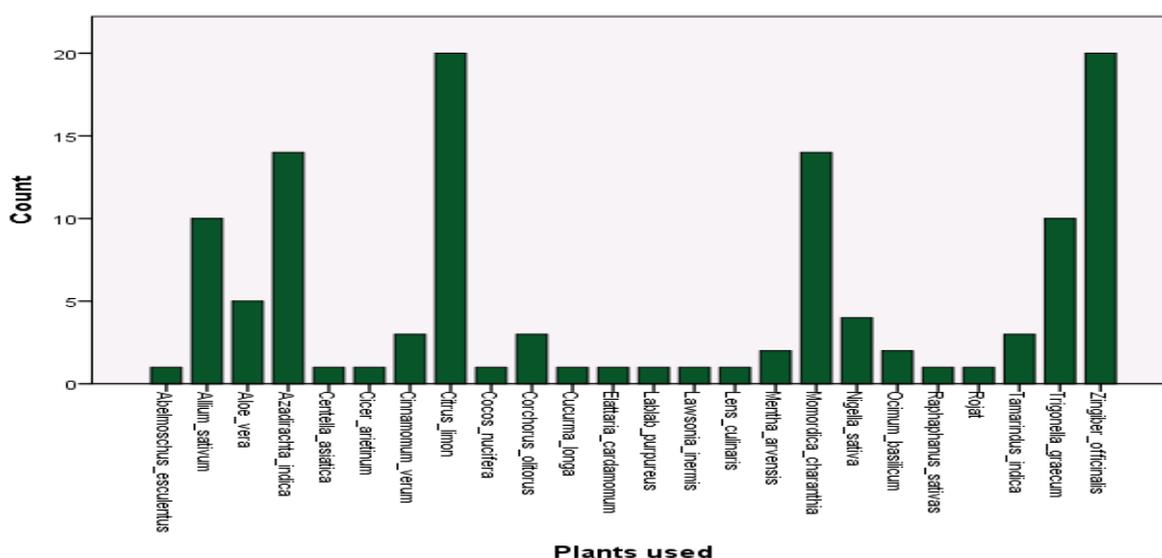


Figure 7: Plants used

4.8 Therapeutic plant use: Bengali plants, adaptation and change

Neem (*Azadirachta indica*), tunimankuni (*Centella asiatica*), uri (*Lablab purpureus*), henna (*Lawsonia inermis*), kerala (*Momordica charantia*), kalo jeera (*Nigella sativa*), methi (*Trigonella foenum-graecum*) and rojat (*Ocimum gratissimum*) are described by participants as ‘Bengali’ plants. It is however very difficult to distinguish between Bengali and non-Bengali plants. All the plants named by participants, with the exception of basil/*tulsi* (*Ocimum basilicum*) are found and used commonly in Bangladesh. However none are exclusive to Bangladesh. While the plants outlined above are described as Bengali, other plants are viewed not as non-Bengali but as common to the UK (*roshun*,

adda, lebu etc.) as well as Bangladesh. Bangladesh as an active source of knowledge (through mothers, past memories and active transnational networks) is the most likely reason for the high number of Bengali plants and plants common to Bangladesh cited. An example of when active transnational networks are referred to is that of plants used for diabetes. Many of the plants used to treat diabetes, something that is strongly associated with older Bengalis, are described as Bengali plants (*neem, korala, kalo jeera* and *methi*). Many of the older participants suffered from and/or were concerned about diabetes. Also, the participants reported sharing information and knowledge through networks both in the UK and Bangladesh. When looking for complementary treatments it was normally the 'Bengali' plants that were used. When looking at other types of ailments that the plants are used to treat, we see that Bengali plants as well as plants common to Bangladesh are important largely due to these active transnational knowledge sources. Additionally, the high number of 'Bengali' plants may be indicative of a symbolic dimension to therapeutic plant use in terms of maintaining and negotiating identity.

The importance of maintaining and (re)creating identity has been highlighted amongst the diaspora; the on-going consumption of 'traditional' food and medicine are highlighted as means to maintaining this identity (Nguyen, 2003, Ceuterick et al., 2008). Bangladesh, as explained, is a practical source of knowledge. By continuing to use 'Bengali' plants and interacting with them through networks, identity as Bengalis may be strengthened. In other urban ethnobotanical studies there have been examples of specific plants as significant to marking identity. Examples include *Erythroxylum coca* Lam. (coca leaves) and *Saccharum officinarum* L. (sugar cane, *panella*) which were found to be used widely within the Columbian community, despite limited effectiveness, and they were positively associated with their homeland. Within this research 'Bengali' plants were perceived positively. Neem is an example of a Bengali plant held in particularly high esteem, having cultural as well as religious significance. It is possible to over-read the symbolic nature of 'Bengali' plants, as it is often their pragmatic use that is often described as most important; however, practical uses and symbolism do not have to be exclusive of each other. Bangladesh is considered 'home' or one's 'roots' by many; it too is a place where active networks of knowledge exist for some, and as a memory for many participants, or the place of one's parents for others. Memory, existing networks, and physical and symbolic interactions with *desh* (Bangladesh, homeland) are all important to understanding therapeutic plant use. While Bangladesh and 'Bengali' plants are critical to understanding food-plants used in this research, what of 'English' plants, change and adaptation? Indeed cultural adaptation too can be reflective of identity as well as interactions with one's host community (Pieroni et al., 2005, Sandhu and Heinrich, 2005, Waldstein, 2006).

When looking at adaptation, let us first look at *Ocimum basilicum* (basil/*tulsi*). While *Ocimum basilicum* is not used in Bangladesh, *Ocimum tenuiflorum* (holy basil/*tulsi*) is. However, in the UK *Ocimum basilicum* is not merely used as a replacement for *Ocimum basilicum* (which is used primarily for coughs and colds), but it is used in general health for food. This plant, not altogether unfamiliar, has therefore made it into the therapeutic food-scape in the UK. *Podmina* (*Mentha arvensis*) is a similar case; while *Mentha arvensis* is found in Bangladesh, so is *Mentha longifolia* var. *asiatica* (Boriss.) Rech.f. (also called *podmina*). As *Mentha asiatica* is less common in the UK, it is *Mentha arvensis* that is a part of the therapeutic food-scape. When looking at the plants used for coughs, colds and sore throats, plants such as *darchini* (*Cinnamomum verum*), *lebu* (*Citrus limon*) and *adda* (*Zingiber officinale*) are used. These plants are not unknown or uncommon in the UK mainstream. Some of the younger participants spoke about learning to use these plants at school or through books as well as from their parents. Thus, while therapeutic plant knowledge normally traces its origins to Bangladesh, it adapts as people travel; while this is a practical reality, it too is reflective of changes within people and reflective of a fluid identity.

4.9 Therapeutic plant use: purposes

There are a range of ailments that people treat or try to prevent through therapeutic plant use at home (Figure 8). The ailments they treat or prevent were expressed mostly in biomedical terms or terms that can be easily translated into biomedical terms. They include upper respiratory ailments (coughs, colds, sore throats), promoting general health, cardiovascular (health of the heart, managing BP, cholesterol), management of diabetes, gastrointestinal complaints (diarrhoea, constipation, stomach upsets), pain or *bedne* (all over aching pain, sometimes arthritic), head, eyes and teeth (general health or pain), skin (general health or acne), jaundice, weight loss and as an anti-septic²². Reasons for these conditions being the ones treated at home are varied, and by examining the different groups we can begin to uncover why they are selected.

The most commonly treated conditions are minor upper respiratory ailments. As explained above, they are frequently treated using teas made with common kitchen plants such as *darchini*, *lebu* and *adda*. The common use of these plants for treatment can be accounted for as the ailments are considered relatively minor; in addition, the plants used to treat them are readily available. Using

²² See Appendix 7 for a full list of plants and the conditions they are used to treat.

plants as a primary treatment in cases where it was not deemed serious enough to go to the doctor and as a first port of call was not uncommon. This was frequently reported for skin conditions, gastrointestinal problems, weight loss, and pain (general, head, eyes, teeth etc.). In contrast, therapeutic plants were also sought when biomedical treatment was perceived to have failed, as discussed in the previous section in the case of *naracal* (*Cocos nucifera*) for cholesterol and *henna* (*Lawsonia inermis*) for jaundice. Plants for general health were normally eaten as food, and thought to be particularly important for good health. Plants consumed for general health were described as 'full of vitamins' and some of the plants would also be used for other ailments, but general health was an important purpose. Commonly found plants such as *Mentha arvensis* and *Ocimum basilicum* were described as important for general health, as well as plants considered Bengali including neem (*Azadirachta indica*), *koral* (*Momordica charantia*), and *methi* (*Trigonella foenum-graecum*). All are available in shops, which may account for their widespread use. In addition their use is not deemed as relevant to going to a practitioner. Plants used for diabetes are an important group of plants. As discussed in the previous section, many are Bengali and their association with the Bengali community is important. The use of *roshun* (*Allium sativum*) as promoting the health of the heart and for BP was well known and relatively well used. The use is therefore due to widespread knowledge of its use within the community, the number of people it may affect and its widespread availability.

Other categories of treatments mentioned (but not used in the UK) include 'cooling' the head (for fever or emotional issues), childbirth and pregnancy, measles and chicken pox and cancer (by one participant). Treatments of these issues (apart from cancer) were reported as having been part of the tradition in Bangladesh; now, the respondents say they would seek biomedical support. Additionally, the plants used for 'cooling' the head and childbirth are less likely to be found in the UK. When conducting fieldwork there was some talk of herbs used during childbirth, though specifics were not given; it is therefore likely that some of these herbs and practice remain, though perhaps not as frequently as the other illness categories.

The different ailments treated did (unsurprisingly) vary slightly according to generation and age (figures 9 and 10). The younger participants were less likely to take treatments for diabetes, the heart and cholesterol as these are ailments associated with advanced age. They were more likely to use treatments for the skin, such as acne, which would affect younger participants, and perhaps they would be more worried about general skin health. There is a general increase in the range of treatments used with age (Figure 10). This may be attributed to increase of health problems or to

rising concerns about such conditions with age.

These are general observations but may give us additional insights into why plants are used. They are frequently used as a first port of call rather than seeking expert advice, due to availability, as an alternative to biomedical practice, due to particular importance within the community and levels of knowledge. The use also varies according to age and generation.

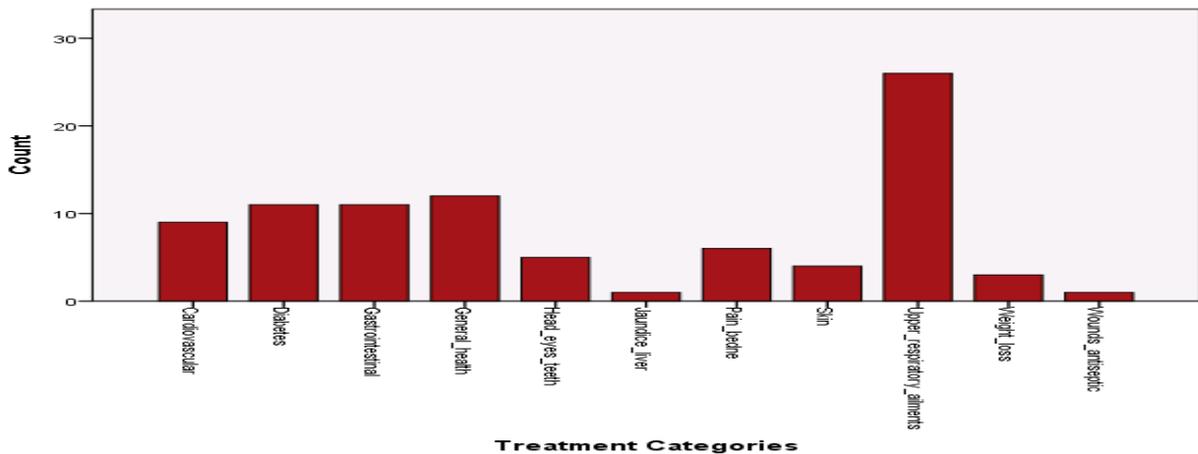


Figure 8: Treatment categories

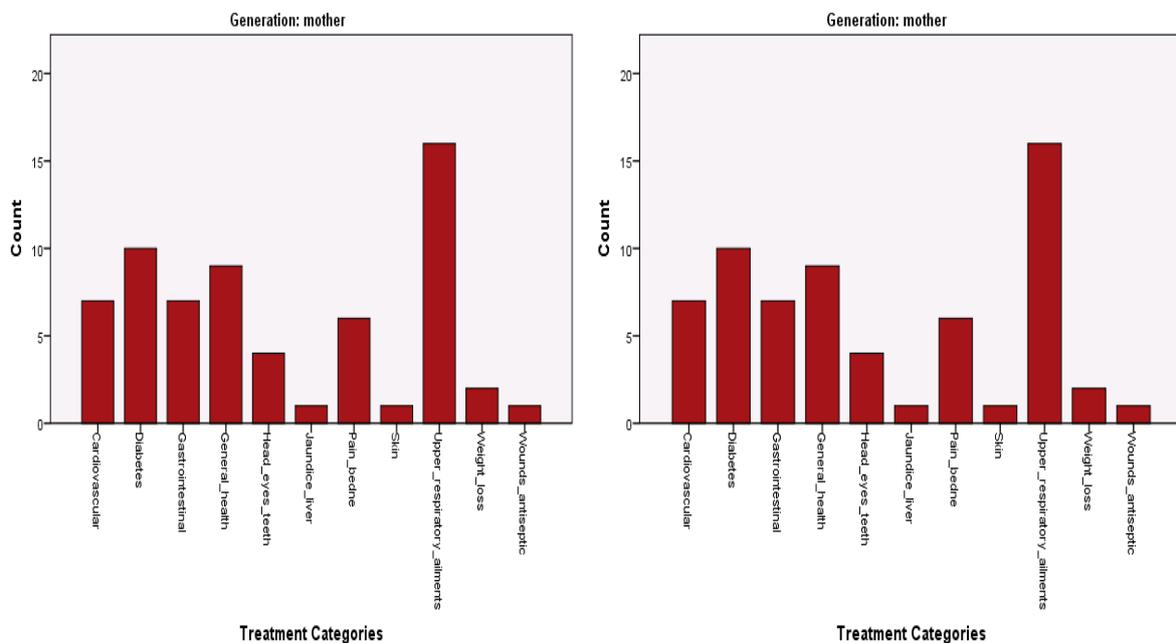


Figure 9: Treatment categories according to generation

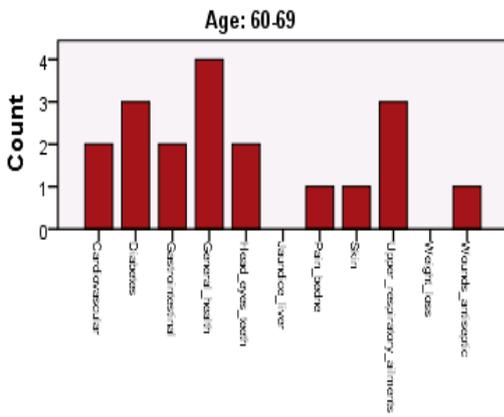
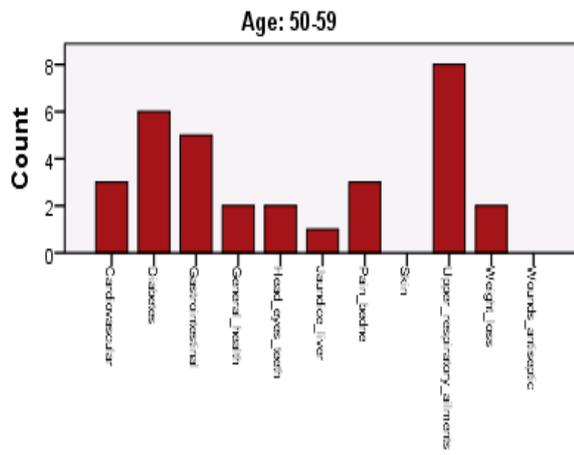
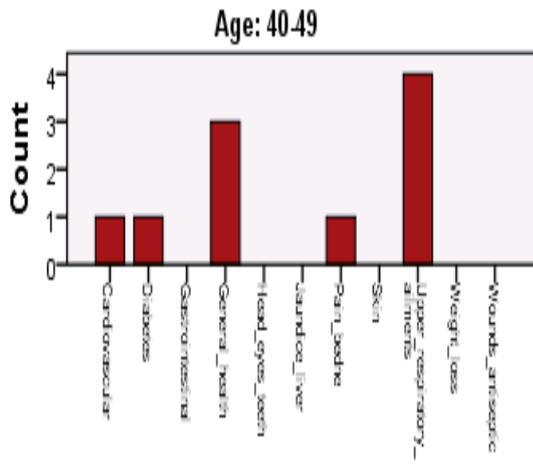
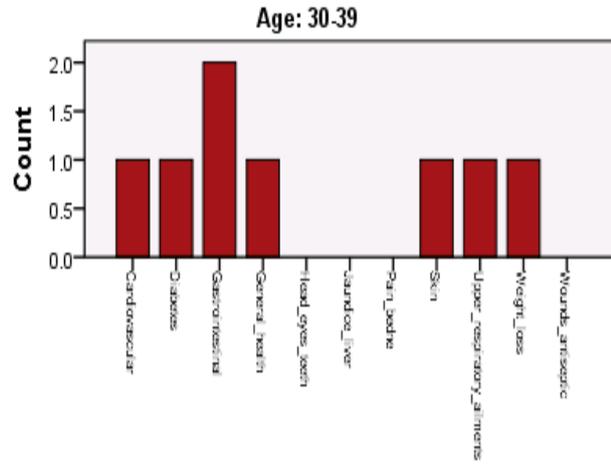
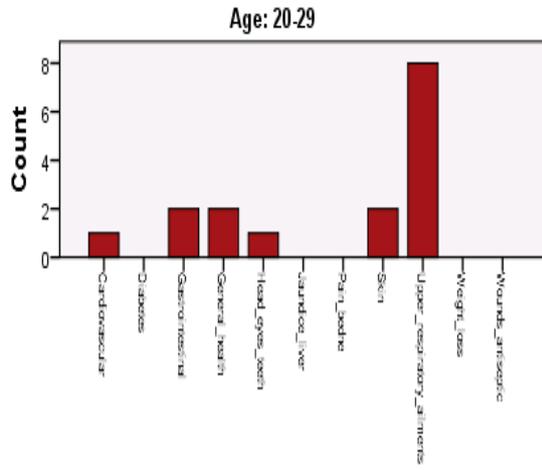


Figure 10: Treatment categories by age

4.10 Intergenerational knowledge and practice

While much ethnobotanical research highlights a concern with the loss of 'traditional' knowledge (Balick et al., 2000), how this applies to urban contexts and their diaspora is indeed fascinating. Whether intergenerational knowledge, age and length of time in the UK impact on therapeutic plant practice will be examined in this section; similar to previous research looking at diaspora, this research found that there are multiple complex factors relating to medicinal plant practice.

The results from this research found that mothers on average know and use more therapeutic plants than their daughters (figure 11). Likewise several urban ethnobotanical studies do indicate lower levels of knowledge among younger generations and/or participants (Sandhu and Heinrich, 2005, Pieroni et al., 2005, Pieroni et al., 2007, Yoney et al., 2009). However, as figure 11 illustrates, the difference between the two generations is not great. Furthermore, when analysing mother and daughter knowledge it is highly variable (table 4). Table 4 shows which plants are used by the 14 mother and daughter pairs; by examining the pairs we can begin to unpick similarities and differences between mothers' and daughters' knowledge, and reasons for them. As indicated in the previous section, mothers are more likely to use plants associated with conditions such as diabetes, BP and pain as well as general health and upper respiratory ailments. Daughters are less likely to suffer from some of these ailments and are therefore less likely to use plants related to these conditions and more likely to use plants for common occurrences such as coughs and colds. It appears that a daughter's knowledge is related to her mother's. When a mother knew few plants (less than five), so did her daughter (pairs 1, 4, 10, 11, and 13). Mothers and daughters tended to either have similar levels of knowledge regarding plants used (pairs 1, 3, 4, 10, 11, 12, and 9), or mothers knew more (pairs 7, 8, 10, and 11). Where the mothers did know more, this is likely to be due to having acquired more knowledge over their life course and being in greater need of treatments (particularly age-related disorders). There was one case of a daughter knowing more than her mother (pair 5). In this case the daughter had a personal interest in medicinal plants and had researched them in books and on TV, rather than learning from her mother or family. When looking at the nature of the knowledge (i.e. plants known) there were several cases of mothers and daughters knowing about different plants (pairs 7, 8, 10 and 11), suggesting that a daughter had not gained her knowledge from her mother. The daughter from pair 8 reported her knowledge coming from school, and pair 10 from other relatives. Pairs 11 and 7 did associate their knowledge with their mothers. The daughter from pair 11 said that her mother previously used the plants when she was younger, while the mother reported no longer using any form of alternative medicine. The mother from pair 7 used many remedies but not the ones her daughter described (for skin). Both these

examples illustrate how when not practicing, knowledge about certain plants and remedies may be forgotten. They also suggest a limit to the questionnaire approach as it is likely people cannot recall all their knowledge in a short space of time. The cases of these daughters also suggest a general willingness to explore the topic of therapeutic plants away from one's mother.

This section illustrates how mother and daughter knowledge appears to be related. It also suggests that, contrary to assumptions, knowledge is not necessarily lost across generations, though knowledge is indeed dependent on multiple factors including familial knowledge, practical need and personal interest. This research, while challenging assumptions of simplistic 'knowledge loss', is concurrent with Alarcón (2010) who argues that there are many reasons for differing knowledge levels between generations. Looking at a very different context (the Basque country in Spain) she argues that there are multiple complex factors included in the level of knowledge and the nature of knowledge regarding medicinal plants. In addition to age they include gender, personal interest, access to resources, education and movement (Alarcón, 2010). Moving onto diaspora in urban contexts, Sandhu and Heinrich (2005), in their study of Sikh medicine, found that when asked about whether Sikh values and traditions (including medicinal plant knowledge) were being lost among the youth, strong responses were generated on both sides of the argument. They argue that there has been rapid change within the community and perceived 'loss' of tradition is a complex and contentious issue. Likewise in Cardiff and London, while some participants spoke of 'medicinal plant knowledge' belonging to older generations of the community, this view was challenged by others. Moving away from generational change, the impact of both length of time in the UK and age may shed more light on medicinal plant knowledge and practice.

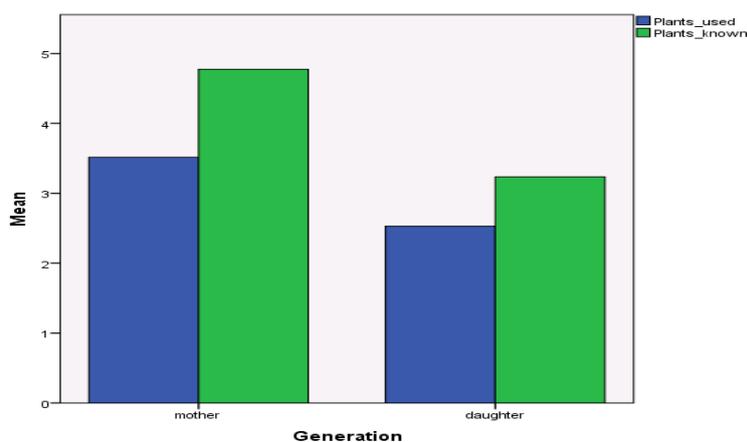


Figure 11: Plants known and used according to generation

Table 4: Mother and daughter pairs: knowledge and practice

Pair	Knowledge (plants known)	Practice (what they are used for)
1	M: 2 (neem, <i>korala</i>) D: 3 (lemon, <i>korala</i> , garlic)	M: diabetes D: sore throat
2	M: 7 (<i>kalo jeera</i> , <i>korala</i> , ginger, Cinnamomum, lemon, tamarind, neem) D: 3 (ginger, tamarind, lemon)	M: diabetes D: doesn't practice
3	M: 8 (ginger, lemon, basil, arjun, mint, <i>methi</i> , <i>korala</i>) D: 8 (ginger, lemon, basil, arjun, mint, <i>methi</i> , <i>korala</i>)	M: colds, sore throat and general health D: colds, sore throat and general health
4	M: 2 (ginger, neem) D: 1 (<i>kalo jeera</i>)	M: sore throats and stomach upsets D: doesn't practice
5	M: 6 (<i>korala</i> , neem, garlic, tamarind, lemon, <i>methi</i>) D: 10 (garlic, <i>korala</i> , lemon, ginger, neem, <i>nali shak</i> , Aloe vera, turmeric, mint, basil)	M: diabetes and BP and dizziness D: general health, diabetes, BP and weight loss
6	M: 7 (<i>korala</i> , <i>nali shak</i> , garlic, neem, ginger, lemon, tamarind) D: 3 (ginger, lemon, garlic)	M: diabetes, heart, general health, pain and cough D: cough and heart
7	M: 8 (neem, <i>korala</i> , garlic, ginger, <i>bara pata</i> , <i>roast</i> , <i>tunimankuni</i> , <i>pak shak</i>) D: 2 (chickpea, Aloe vera)	M: toothache, allergies, general health, skin, vomiting, diarrhoea, BP, diabetes D: skin
8	M: 7 (<i>korala</i> , <i>uri</i> , <i>bindi</i> , neem, <i>kalo jeera</i> , <i>methi</i>) D: 2 (lemon, garlic)	M: general health, body pain, stomach pain D: general health, stomach
9	M: 9 (neem, <i>nali</i> , <i>methi</i> , <i>korala</i> , ginger, lemon, garlic, <i>roast</i> , <i>baro pata</i> , <i>tunimankuni</i>) D: 5 (lemon, neem, Aloe vera, <i>korala</i> , tamarind)	M: body pain, general health, stomach, diabetes, coughs, sore throat D: skin, coughs
10	M: 3 (<i>methi</i> , Cinnamomum, ginger) D: 2 (ginger, tamarind)	M: body pain, colds, coughs D: colds, cough
11	M: 2 (<i>korala</i> , neem) D: 2 (garlic, lemon)	M: does not use herself D: sore throat and vomiting
12	M: 3 (ginger, lemon, <i>kalo jeera</i>) D: 2 (ginger, lemon)	M: coughs, stomach pain D: coughs and colds
13	M: 9 (ginger, coriander, <i>tunimankuni</i> , ginger, holy basil, <i>bon jamir</i> , <i>don kolosh</i> , <i>shohago</i> , neem, lime) D: 10 (neem, turmeric, henna, <i>bipata</i> , lime, ginger, <i>kera</i> , <i>don kolosh</i> , <i>tunimankuni</i>)	M: acne, coughs D: coughs
14	M: 7 (lemon, ginger, <i>roast</i> , <i>methi</i> , coconut, <i>tunimankuni</i> , <i>bhati</i>) D: 4 (Cinnamomum, ginger, lemon, <i>methi</i>)	M: cough, stomach upsets, general health, high cholesterol D: colds

4.11 Age and therapeutic plant use and practice

If we start with the common hypothesis that medicinal plant knowledge increases with age, the graph below appears to confirm this general pattern.

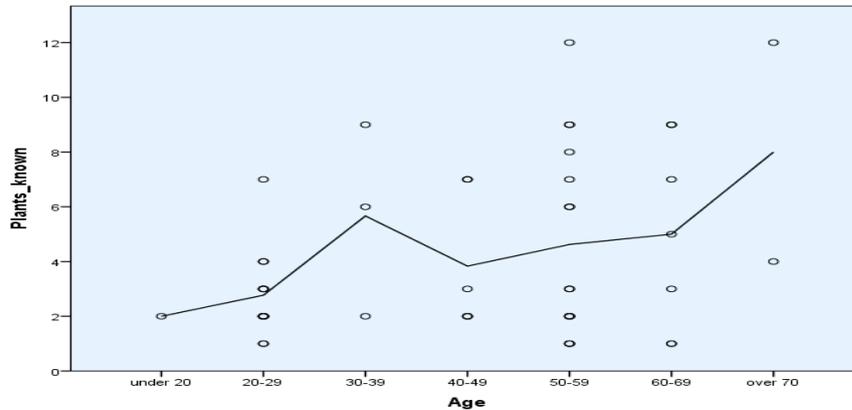


Figure 12: Plants known according to age

When examining practice (plants used) there is a slightly different story. There is a limited increase in practice with age (Figure 13); however, with the eldest group there is a tailing off of practice. This could be due to mothers (and healthy grandmothers) being care-givers both to children and their parents; the oldest group is therefore less likely to practice. There is a peak in practice (and knowledge) in the 30-39 age group, as this is an age that women are likely to have school age children. There are higher levels of practice among age groups 30-69 than in their younger counterparts; it is more likely that they would be caring for families than those participants in their twenties. Practice decreases dramatically in the over-seventies group, as by this age it is likely that care giving activities will have decreased. Furthermore it may be that they do not remember all the plants they previously used (Alarcón, 2010).

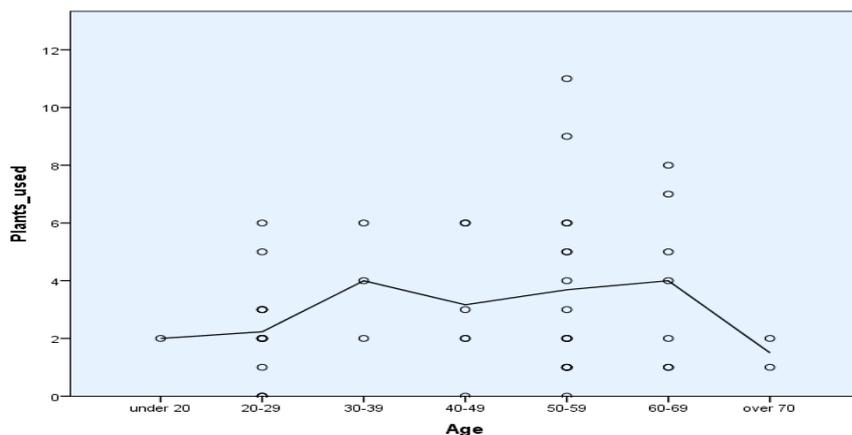


Figure 13: Plants used according to age

While we can make general observations, the scatter plots do show a wide range of responses in both use and practice for each age category; for example, in the age group 50-59 the number of plants used varied from 0 to 11. The range of responses within any given age group (for both knowledge and practice) suggests that there are multiple factors involved in plant use and knowledge, of which age is one. Pieroni (2007, 2010), when looking at South Asian communities in Bradford, found correlations between length of time in the UK and therapeutic plant knowledge. This too is examined in this research.

4.12 Time in the UK and therapeutic plant use and practice

There exists an initial high level of practice and knowledge upon arrival from Bangladesh (living in the UK 0-5 years) (Figure 14) and a sharp decrease for the period 11-15 years, followed by an increase in knowledge and practice among those who have lived in the UK longer. When looking at the number of participants in each group, the numbers are skewed with only three of the participants in the sample having lived in the UK for less than 16 years (see table 6). There is a range of knowledge and practice across the remaining groups of participants, and little difference between the groups in terms of average plant knowledge and practice. While initial arrival from the UK may be associated with increased plant knowledge and practice, there is a spread of knowledge across the participants in the other categories with little difference between their averages. These results suggest that the impact of length of time in the UK is limited, with age and familial knowledge and networks likely to have more of an influence. More data is needed to be able to draw any firm conclusions regarding the association between length of time in the UK and medicinal plant use and knowledge.

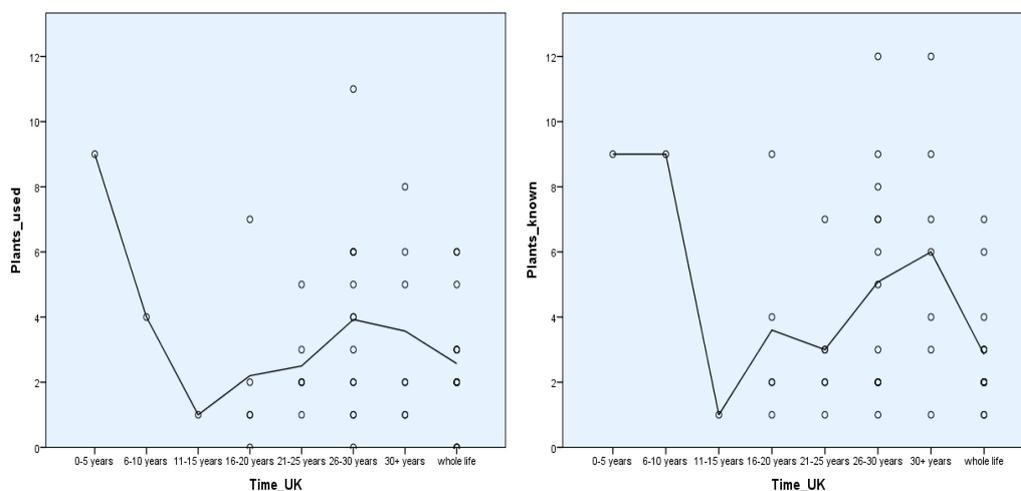


Figure 14: Time in the UK and medicinal plant knowledge and practice

Table 5: Participants' time in the UK

Time in the UK	Frequency	Percent
0-5 years	1	2
6-10 years	1	2
11-15 years	1	2
16-20 years	5	10
21-25 years	6	13
26-30 years	13	27
30 + years	7	15

4.13 Summary and conclusions for preliminary research

The research explored in this chapter provides a 'snapshot' into British Bengali therapeutic food-plant practice, illuminating many interesting trends and practices, some of which will be further explored later in the thesis. The findings highlight that therapeutic plant use does depend on multiple factors, varying across individuals, families and groups. The food-medicine overlap is evident in the research as spices and vegetables are used as food and medicine interchangeably. Therapeutic food-plant practice among the participants in this research was rarely used strictly as a substitute for biomedicine. It tended to be a first port of call before going to the doctor and/or alongside biomedicine, for example in food. There were occasional reports of plants being used when biomedical treatment failed. As the purpose of the plants depended on the needs of the person being treated, the research also indicates that the choice of plants used is primarily pragmatically motivated. Those plants that are found commonly in the kitchen and shops are used frequently. Additionally, those plants that have multiple purposes tend to be used more. Plants may also be sought out (often with more effort) when biomedical treatment appears not to work. There may also be an element of personal preference in deciding which therapeutic plants to consume, particularly with regards to food. There, too, is a symbolic dimension in medicinal plant use, as the preference for 'Bengali' plants and the importance of Bangladesh as a knowledge source suggests. For older participants, Bangladesh is important as a source of knowledge; both in the past, through memory, and now, through transnational networks of knowledge and the transportation of Bengali plants (through both formal and informal channels). For younger participants there is not this same connection with Bangladesh or 'home' there; however, home 'here' is important, with knowledge being closely related to mothers and, in some instances, the wider mainstream via the media, school

and books. While the generational gap is evident in the source of one's knowledge when looking at the level of practice, the differences in regards to age and the amount of time people have spent in the UK also affect their therapeutic plant practice. It appears from the limited data that being of care-giving age is an important factor in therapeutic plant knowledge. Overall, the data does illustrate that there is a range of influences on therapeutic plant knowledge and practice.

The pragmatic use of therapeutic plants, the food-medicine overlap, differing sources of knowledge, links with one's 'home' country, generational and age differences and similarities in therapeutic plant use have been explored in different studies and in different contexts. However, with regards to Bengali-British women and therapeutic plant practice there has been limited research. Through looking at specifically female knowledge at a household level, this study adds to the growing body of evidence on urban ethnobotany in exploring how plant use both adapts and stays the same with diaspora. As outlined in the introduction to this chapter the data explored here, while interesting, is limited in scope. Given the importance of the food-medicine overlap, inter-generational change and continuation and links with *desh* (homeland, Bangladesh), my research evolved to explore these areas in greater depth. In the subsequent three chapters of the thesis I examine the results of the in-depth research conducted in London and Sylhet. Specifically I look at exchanges between Bangladesh and the UK at a household level, Bengali food and home and health in the UK and, finally, therapeutic and food landscapes in Sylhet, and how these are impacted by links to Bangladesh.

Chapter Five: Sylhet to London and Back Again: Exchange Between *Desh* and *Bidesh*

5.1 Sylhet and London exchange

Despite a distance of over 7,000 miles, decades of migration between the UK and Bangladesh has left its mark on both places. According to the 2011 census, there are close to 450,000 people of Bengali (Bangladeshi) heritage in the UK, an increase of over 50% since the last census in 2001. In terms of formal links between the two countries the British government, through DFID, are the largest bilateral donor to Bangladesh, spending an average of £250 million per year in Bangladesh until 2015 through various development programmes (mostly concentrating on health and education) (DFID, 2012). Regarding trade, major exports to the UK from Bangladesh include garments, food, jute goods and agri-products worth a total of US\$2,065 million (High-Commission-for-Bangladesh, 2012). Exports from the UK to Bangladesh include cotton, ships and boats, iron, steel, machinery, fertiliser and electrics worth US\$333 million (High-Commission-for-Bangladesh, 2012). It is difficult to get an accurate estimate of the number of businesses run by Bengalis (and more specifically Sylheti) in the UK. The London Employer's Survey estimated the number at 750 in 1999, though the Bangladesh Caterers Association claims the number of Bengali-owned restaurants alone is 2,500 (London-Chamber-of-Commerce-and-Industry, 2003). In addition to restaurants and takeaways, other Bengali-run businesses include food and convenience stores, travel agents, banks and law offices (London-Chamber-of-Commerce-and-Industry, 2003). Many claim to import food from Bangladesh and more specifically Sylhet. Looking at relations in terms of sectors (arts, education, civil society, government, science) a recent 'cultural mapping project' was conducted by the British Council²³. It found that the relationship between the UK and Bangladesh is, in many ways, a personal one with heritage, history and family ties important to understanding on-going connections. Though the relationship does vary according to regions and sectors, overall it is somewhat patchy despite some excellent examples of collaborative work (British-Council, 2012). Interestingly, in Sylhet research participants tended to be more positive about the relationship between the UK and Bangladesh than their counterparts in other regions of the country (Dhaka and Chittagong specifically) (British-Council, 2012).

²³ I was personally involved both in the research and writing of the final report for the 'cultural mapping project'

The exchange of goods and foodstuff between the UK and Bangladesh and, more specifically, between Sylhet and London, is visibly evident in both places. During fieldwork, Sylhet was sometimes referred to as '*duttio* London' (second London). The high number of people with connections to the UK, the increasing availability of fast food places, malls and markets with foreign goods as well as malls and houses funded by Londoni money are evidence of the foreign and, more specifically, Londoni links in the area²⁴. The impact of Sylhet in London too is palpable with the booming restaurant trade, the Bangla street signs in East London and the many halal butchers, shops selling Bengali fish and vegetables, *mishti dokans* (sweet shops) and *paan*²⁵ shops found in pockets throughout the city. While much of this exchange is personal (through business links and economic remittances) it is very much in the public domain. There is little data about the exchange of goods at a household level between the UK and Bangladesh. This exchange is crucial to understanding connections between the places as well as the spaces they are part of. This PhD explores what is exchanged and why at a household level. As far as I am aware, this is the first piece of research exploring what exactly is exchanged between Bengali and UK households (see table 6).



Figure 15: A 'Bengali' shop in London

²⁴ It should be stressed that the UK is not the only foreign influence in Sylhet; links with India, the Middle East and more recent migration to the USA, Canada and Australia are important.

²⁵ *Paan* is *Piper betel* leaf. It is prepared with *Areca* nut and various other items.

5.2 Approaching transnational transactions: value chains and anthropological research

Before exploring what is exchanged it is useful to briefly explore the concept of 'value chains'. A value chain describes the range of activities and the actors involved, from a product's conception to the point of its delivery (Kaplinsky, 2000). Value chains can be relatively short, for example in the case of a local medicinal plant: wild plant - picked by healer – given to patient. Or in the case of a local farmer: food plant germinated and grown by farmer - sold by farmer at a local market to a client. Value chains can also be very long, involving middlemen, multiple transporters and traders, branding and advertisers, healers and/or shopkeepers and supermarkets before a client gets the product. Analysis of the value chain involves looking at where, how and why value is added along the chain (Hawkes and Ruel, 2011). While value is normally measured in economic terms, there too can be an attribution of values from moral and/or ethical perspectives (Hawkes and Ruel, 2011). As well as the value of the product, the socioeconomic benefits, risks and disadvantages for actors along the value chain may be examined (Booker et al., 2012). Value chains can be analysed from a range of perspectives and are used as a framework by multiple disciplines. They can be used for business purposes in strictly economic terms (Hawkes and Ruel, 2011), in policy development (Kaplinsky, 2000), and in economic and agricultural development practice (Hawkes and Ruel, 2011). The products that may be analysed vary: for example, in the 1960s and 1970s value chain analysis was used for the export of minerals (Kaplinsky, 2000), more recently the costs and benefits of fair-trade products such as tea and coffee have been assessed using such analysis (Blowfield, 2004, Booker et al., 2012) and, in international development, value chains analysis has been applied to products such as food exports (Bolwig et al., 2010). Booker et al., (2012) apply the analysis to develop a framework to help understand value chains in an ethnopharmacological setting. In this context they stress the importance of regulations and quality assurance, how the benefits can be shared between household economies of actors along the value chain, and the importance of understanding the changes as plants and food become global commodities. While food and medicine value chains are fascinating, and it is likely that many of the products exchanged between the UK and Bangladesh pass through numerous hands, this research will look at what is transported and the meanings ascribed to the exchanged items. For many of the participants, distance and where something is bought or grown do matter (but in differing ways), as both the local and the global are important. Rather than looking at all the actors along the way of 'travelling plants' I am principally concerned with the participants at each end, though the processes along the way and the chain itself may be of concern to them, and in which case is of interest to this thesis. Furthermore, while the thesis explores the local context it does so in the framework of broader processes.

Food has long been established as a 'boundary marker' in anthropological research; how this is important to maintaining, negotiating and creating identities, too, has been a matter of interest (Mintz and Bois, 2002). When looking at 'travelling food' there has been interest in how 'food from home' is important to marking identities (Ray, 2004) and maintaining connections with home (Vallianatos and Raine, 2008), or how they are agents of dietary change to the 'host' country (Phillips, 2006). Taking a more global perspective, there has been interest in single commodities (such as sugar) and how they illuminate social processes (Mintz and Du Bois, 2002, Phillips, 2006). When looking at how globalised food has been studied, Phillips (2006) points to it being studied as commodities (looking at regulation, standardisation and labour), through transnational co-operations and global governance (how food is mobilised and governed). It is often difficult to link global flows and broad processes to local lives. Edible foods, while essential, are often commodities; these commodities are linked to people (Phillips 2006). Phillips (2006) suggests that some of these global flows can be explored through differing approaches such as the 'lives' of the commodities (for example, markets and organisations) in localities, or looking at how this could be explored through bodies (for example, fatness and commoditised bodies) or, finally, through 'scale making projects' and landscapes of accessibility and scarcity.

There are clearly many ways of exploring this concept of 'global flows, local lives'. This research is primarily concerned with how household, informal exchange at a transnational level makes a difference to the local food medicine practice. Though the research concentrates on the 'edible', other products exchanged are also examined as they illuminate different meanings within the context of exchange. Due to the concentration on informal channels at a household level my research may lack some of the global considerations of the industry, though this is something I am well aware of. I will draw on work on diaspora as well as 'gift giving' (Alexeyeff, 2004, Codesal, 2010). As gifts and products exchanged are embedded in power relations, the concept of 'capital' (resources as a means of progression) is useful and will be applied to this research. This chapter will therefore explore *what* is exchanged²⁶ before looking at *why* in terms of gifts, transnational networks, power relations and concepts of 'capital'. In order to have a theoretical framework I draw on Bourdieu's theories of 'capital' to look at how different things can progress one's place in order to understand

²⁶ While I discuss exchange between the UK and BD it should be noted that not all of the items exchanged originate from the country from which they are brought. For example, many of the seeds brought from BD originate in other Asian countries. Most of the clothes sent from the UK to BD are not made in the UK (ironically, it is likely some are made in BD). However the items are generally spoken about in terms of coming from the place from which they are sent (UK or BD).

why 'capital' exchanged is important. This chapter provides a background and a framework for looking into the changing landscapes of the home in a global context in both the UK and Bangladesh.

5.3 Exchange at a household level: what is exchanged?

On discovering that I was travelling to Bangladesh one winter, Lili (a research participant and gardener) promptly invited me to her house and asked exactly how much luggage I could take for her. I agreed to take one bag weighing no more than 5kg. Visiting her house before her departure she phoned her various relatives in her home village, and told them about myself and that I would be visiting in the next month. She then gave me instructions as to how to get to the village as well as a list of numbers and names of her relatives that I was to contact before visiting. She gave me a bag of stuff (clothes and toys) as well as a sari for my mother. On this same trip I agreed to take a small present of baby clothes and lotions for the newborn grandson of Shona's sister, as I knew Shona's family well and regularly visited them during my time in Sylhet. The cases of both Lili and Shona highlight some of the reasons why items are sent from the UK to Bangladesh. Shona's gift was a personal one bought for a specific reason (the birth of her great nephew); if I had not been able to take it, Shona told me she would have posted the gift. Lili's gifts too were personal but more opportunistic; upon hearing that I was travelling to Bangladesh, she decided it would be a good opportunity to send things to her home village. There was a cold spell in Bangladesh at the time of my departure so she sent several jumpers that her children no longer wore; she also thought some of the younger relatives would enjoy an old Game Boy, and she purchased a few additional toys. Sending clothes that are less widely available there is not unusual, serving a practical need. Lili told me that many of her relatives (and other people in the village) are poor and need things like clothes. Toys and treats for children too are common, though this is by no means exclusive to transnational exchange; people frequently take gifts, particularly for younger relatives. Table 6 shows the many items sent from the UK to Bangladesh. In addition to clothes and toys, gift items such as jewellery, electronics and cosmetics are frequently sent as well as various foods and medicines. The food taken includes treats such as sweets, crisps and biscuits as well as those less readily available in Bangladesh such as jams, cereals and mayonnaise. The various types of medicines (pills, ointments, oils) sent have often been advised or requested by familial networks. Food, clothes and medicines, as well as being transported from the UK to Bangladesh, are transported from Bangladesh to the UK. However, as illustrated in table 6, the forms of the food, clothes, medicines and other stuff exchanged tend to be different.

The reasons for exchange of items from Bangladesh to the UK are varied; they include gift giving, practicalities (cheaper), quality ('better' or 'tastier'), availability and advice and wider therapy networks. Through looking at the import of food items from Bangladesh to the UK, we can scrutinise some of the reasons for exchange. Many of the vegetables and fish brought from Bangladesh to the UK can be found in shops in the UK. However, they are reported to taste better coming from Bangladesh as well as there being a greater choice of items there. Certain foods, though available in a few shops in London, are specifically viewed as Sylheti, such as *shatkura* (a citrus fruit), naga chillies, and *tenga* sauce (a tomato-based sauce used in curries). As the source of 'Bengali' or 'Sylheti' food it is perhaps not surprising that many food items are sent from Bangladesh, and are considered better for coming from there. Other foodstuff sent to the UK is less commonly available and more expensive in the UK, such as seasonal fruit, some spices and certain food medicines (fresh neem, *rojat*, *tankuni*). Seeds are frequently sent from Bangladesh to the UK; while many of them are available in the UK, the ones from Bangladesh are said to grow 'better'. Many of the foods in addition to other items are sent as gifts. Medicines, too, are sent from Bangladesh to the UK. While the items are different to those sent from the UK to Bangladesh, some of the reasons given for the exchange are similar. They have often been advised or requested by wider familial networks. While the practical reasons for sending and receiving items are straightforward, it is worth examining in greater detail the role of gift giving (and receiving) and transnational therapy networks in exchange.

Table 6: Exchange between the UK and Bangladesh: items and reasons

Where?	What?	Why?
UK to BD	Food: treats: sweets, chocolates, crisps, biscuits	Usually taken as gifts. " <i>The sweets there are not very good in Bangladesh</i> ", one relative reported. Several participants reported they are taken particularly for children.
	Food: cereals (cornflakes, rice krispies, cocoa puffs, etc), juices, canned sardines, jams, mayonnaise	These are items that are not normally found in BD. They may be brought as gifts or, often, are requested by relatives in BD. Cereals are particularly popular.
	Spices: cinnamon, cloves, cumin, turmeric (mostly dried)	In the instances they were brought they were reported to be cheaper. One participant said they had originally come from India and therefore are better than those found in BD or the UK.
	Clothes: jumpers, trousers, t-shirts, children's clothing etc.	Were sent/brought by relatives. The clothes are both new and second-hand. One participant said they sent back " <i>clothes that can be worn over there</i> ". During a cold winter in BD a lot of warmer clothes were sent.
	Children's toys and games	Normally sent/brought as presents for younger

		relatives. Both new and second-hand toys are sent.
	Jewellery: earrings, necklaces, watches, etc.	Normally brought as gifts for relatives.
	Electronics: mobiles, laptops	Occasional reports of them sent as gifts by Londoni relatives. Electronics in Sylhet tend to be more expensive and less commonly available than in the UK.
	Medicine: paracetamol, vitamins, joint pain gel, E45 cream, skin creams, olbas oil	Described as ' <i>khub bhalo</i> ' (very good), often they are sent as required. Some were reported to be better than medicines found in BD (paracetamol, joint pain gels). Others are hard to find in BD or expensive - olbus oil and E45. Often they were recommended by relatives in the UK for relatives who were not well.
	Cosmetics: baby oil, moisturisers, lotions, face wash	They may be easier to find in UK. They were reported to be better than those found in BD.
	Other: soap powder, fairy liquid	They are more expensive, with less choice in BD than the UK.
BD to the UK	Food: fresh vegetables: chillies (<i>naga</i> particularly), lemons, <i>krishna kochu</i> (black taro), <i>shatkura</i> (citrus fruit)	Reported to be 'fresh' and tasty. Lemons in the village were described by one participant as "powerful". Some are harder to acquire and may be grown in a relative's garden e.g. <i>krishna kochu</i> . Some of the items are considered particularly 'Sylheti' (such as Naga chillies and <i>shatkura</i>)
	Food: cinnamon, cloves, spices, cardamom, turmeric (dried and fresh)	This is less common: " <i>they are a little bit better and a little bit cheaper</i> "
	Food: snacks: <i>mouri</i> (puffed rice), <i>chanachur</i> (Bombay mix)	Often brought back as gifts. Can normally be found in shops
	Food: fresh fruit: <i>borois</i> (jujube), mangos, tamarind, bananas, coconut, sugar cane	Less available in the UK, and cheaper in BD. Often brought back by relatives, sometimes requested
	Food: <i>shutki</i> (dried fish), <i>panir</i> (soft Indian cheese), chutney, <i>tenga</i> (tomato-based sauce for curries), powdered milk, <i>ghee</i> (clarified butter), <i>chal</i> (uncooked rice)	Can be bought in the UK, but there is more choice in BD, it is also reported to be 'fresh' and better quality. Other items may be less common in the UK and therefore are bought or sent back
	Food: homemade: pittas, sweet <i>paratha</i> (fried flat bread), chutneys	Sent from relatives. Also food in the other categories may be prepared (e.g. <i>borois</i> and <i>shutki</i> dried). " <i>The difference is that they are handmade</i> "
	Food: other: fresh <i>paan</i> leaves (<i>Piper betel</i>) and fresh and dried <i>shupori</i> (<i>carecachu</i>)	
	Food-medicine: neem, <i>rojat</i> , <i>tunimankuni</i> (fresh)	Dried neem and <i>rojat</i> leaves can be found in shops. However the fresh ones are harder to find.
	Medicine: Apitherapy medication	Would be sent from a participant (who practiced Apitherapy) to her sister.

Medicine: various <i>kobiraji</i> medication	This was reported by a <i>kobiraj</i> who said that Londonis regularly visited his shop to buy various remedies. In shops in Brick Lane, various remedies were found (for example <i>kalo jeera</i> oil and dried plants); much of this stuff was transported from the Middle East.
Clothes: sandals, <i>gamcha</i> (light towel)	These items are cheaper and more widely available in BD. They are often requested.
Clothes: three-piece <i>salwar kamiz</i> , saris	Often as gifts. " <i>It feels good to wear something from home</i> ".
Seeds: <i>amaranthus</i> , various beans, gourds, radishes, tomatoes, chillies, pumpkin and <i>shaks</i> (leafy vegetables)	This was very common among the gardeners. In Sylhet the shopkeepers reported putting boxes aside for their Londoni clients.
Cosmetics: soap	Cheaper.

5.4 Gift exchange

The means of gift exchange varies. Londonis will take items when visiting Sylhet, send gifts with friends and/or relatives (as in my case) and occasionally use the postal service. When returning to the UK there were frequent reports of participants and others filling their suitcases with food and other items they acquired in Sylhet. Some of these items may be gifts from relatives. Other items are carefully selected and bought by the participants. This stuff is rarely exclusively for individuals but frequently shared among family members back in the UK. As illustrated above, many of the items, be they food, toys or clothes, are gifts sent between family members. While two participants in the UK said they were not sent or given anything from Bangladesh as "*in Bangladesh they are poor*", all others spoke about a two-way exchange, the extent to which is varied across individuals and families. Below is an extract from an interview with Shona where we are discussing what relatives send between the UK and Bangladesh:

Hannah: *And so you send things back and forth?*

Shona: *Yes they do, I do as well*

Hannah: *So what would you send?*

Shona: *All sorts of things, clothes you know, presents sometimes, they'll also send to us*

Hannah: *So you would send clothes, would you send any foods?*

Shona: *Not really, sweets, sometimes sweets.....chocolates, mainly chocolates*

Hannah: *Any other sweets stuff?*

Shona: *Uh no, they like clothes and chocolates, that's that's....*

Hannah: *So western clothes or salwar kameezes (Asian dress set, a long top and trousers)?*

Shona: *Different ones, you know it depends on which ones they like...western ones, they can wear depending on which ones you buy like cardigans and jumpers or shirts and trousers, they can wear it*

Hannah: *Yeah, and what would they send here?*

Shona: *They send us most of the clothes as well and food as well*

Hannah: *Ok, so what kinds of food?*

Shona: *Oh sometimes you know, the dried food, like for example things they make by hand like pittas.....dried coconut.....what else, um um, it's what we call mouri (puffed rice)....some people send.....yeah, when they come, yeah when they come they bring it from Bangladesh. They bring us the pickled stuff, the pickles as well, handmade...that's the difference, handmade, that's it, that's all*

The interview illustrates how exchange is very much reciprocal, though what is exchanged between the places is different. The nature of 'gifts' varies hugely. Some are very personal gifts such as handmade food and presents chosen for individuals, others are sent due to demand or requests, and still others are sent for general distribution and are far less personal. The clothes sent to Lili's village are an example of the latter; such distributions are not uncommon. During fieldwork I was told by many Londoni families that they would need to save up in order to go to Bangladesh, not only for the air fare and gifts for family members but also to give money and items to poorer members of the community in Sylhet. However, it tends to be the more valued and personal gifts that are given to family members. The different types of exchange can be interpreted as different types of 'capital' saying much about the giver and the recipient of items (this is discussed in greater detail in section 5.7). Mauss, in his influential analysis of gift exchange, argued that gifts are always reciprocal and never 'free', and are important ways of creating and sustaining relationships between persons and groups (Mauss, 1984). He suggested two key types of gift exchange; the first associated with kinship relationships and the second dominated by class and a division of labour (Mauss, 1984, Carrier, 2001). Though originally he saw them as commodities that were characteristic of different types of societies (industrial and non-industrial) he later recognised that the two could co-exist (Carrier, 2001).

The gifts exchanged between the UK and Bangladesh is indicative of a relationship between transnational networks as, by sending presents, people are remembered and relationships maintained and embodied by the gifts. Additionally the flow of 'stuff' between the UK and Bangladesh by the participants is primarily between familial networks (both in terms of amount and quality). In this way they can be interpreted as maintaining kinship relations as Mauss suggests. As

highlighted earlier, the 'gifts' sent are very much a two-way exchange. While 'Londonis' in the UK may be perceived as having money and are expected to give not only to their relatives but also to extended networks, relatives in Bangladesh continue to send food, clothes and other items to the UK. The gifts, too, are carriers of feelings and emotion, something discussed later in the thesis (see chapter 6). The visceral nature of some of the food gifts sent from Bangladesh to the UK embodies memories and tastes, making them more personal. Alexeyeff, when looking at exchange, particularly in terms of food, between the Cook Islands and family networks in New Zealand, argued that "economic reductionism cannot explain the profound impact that acts of exchange can have on people" (2004:73). Similarly, the gifts sent from the UK to Bangladesh are indicative of on-going relationships between familial networks that expand beyond economic interpretations. As expressed by one older participant in Sylhet: "*they bring us these things because they love us*".

5.5 Transnational therapy networks

The exchange of medicines and food-medicines is an interesting one that highlights how familial networks stretch across countries. It should be noted that the physical exchange of items for specific therapeutic reasons is not widespread among the participants, though a significant minority did report doing so²⁷. Though few participants reported the actual exchange of physical products for therapeutic purposes, many did report discussing and advising relatives across seas regarding illnesses and treatments. This kind of exchange (both verbal and physical) is indicative of wider 'therapy networks'. Krause (2008) explored the concept of 'transnational therapy networks' among Ghanaians in London. She uncovers a dynamic exchange of moneys, medicines, prayers and advice between Ghanaians in London and extended formal and informal networks in Ghana (Krause, 2008). These networks illustrate the transnational nature of therapy networks and how there may be multiple views of health both in terms of beliefs and treatments.

The example of medicines travelling between the UK and Bangladesh are between relatives and, like the Ghanaian example, are results of an exchange of advice. It should be noted that it has become increasingly easy to communicate through technology (mostly mobile phones) between the UK and Sylhet (Gardner, 2008, Zeitlyn, 2013). There are several examples of medicines travelling both ways between the UK and Bangladesh, though what is exchanged is different. Medicines sent from the UK

²⁷ Five of the interviewees reported regularly sending and/or receiving medication. During fieldwork at community centres and in Sylhet, there were several reports of this occurring.

to Bangladesh include pills (paracetamol, vitamins) and various gels (for skin and pain relief). Rosa (a research participant in London) sends multi-vitamins and a topical gel for her father's arthritis as well as olbas oil for her sister in Bangladesh. She told me that her father is elderly and the gel she had taken previously had helped relieve his pain, he has since requested it again. The multi-vitamins had been suggested by her sister-in law (Rosa) in Bangladesh who thought they may build up his strength. Rosa had consulted with her family about her father, and the treatments found in the UK were additions to those used by the family in Bangladesh. For Rosa and her family, the UK is merely another supplier of medicines and an extension of their medicine-scape. Halima (a participant in Sylhet), however, sees things slightly differently. When her Londoni aunts visit she reported that they bring '*shopto oshud*' (strong medicine) such as paracetamol. "*Can't you buy that here?*" I had asked her "*isn't it napa?*"²⁸, "*yes but it is not as good*", Halima told me. There was some evidence that others perceived the (bio) medicines and ointments sent from the UK as having more strength or being better than the ones in Bangladesh or even those shipped from India or the Middle East. The quality, standard and possible adulterations of medication are topics of concern in academic discourse. Following the introduction of a national drugs policy in 1982, there has been both an increase in home-grown pharmaceutical companies (there are estimated to be up to 300) and a reported increase in quality of pharmaceuticals in Bangladesh (Chowdhury et al., 2011). However, the quality, safety, and legitimacy of drugs accessible on the market remain a major concern (Shill and Das, 2011). With a weak enforcement of regulations, many companies produce drugs of questionable quality²⁹ and there have been incidences of adulterated drugs with fatal consequences³⁰ (Shill and Das, 2011). During the research period in Sylhet I did not hear any concerns specifically regarding the adulteration of medications, though Bengali medicines were often referred to as inferior to foreign drugs. Safety was occasionally mentioned, in which case medicinal plants were sometimes chosen as an alternative to biomedicines (this is discussed in greater detail in chapter 7). The (perceived) quality and safety of medicines and food-medicines no doubt impacts on advice, exchange and the transnational therapeutic landscape.

²⁸ Napa is the most common trade name for paracetamol in Bangladesh.

²⁹ It is estimated that of the 16,000 brands of drugs available on the market in Bangladesh, only 4,000 are tested for quality (Chowdhury et al., 2011). During its annual testing in 2004, the Bangladesh drug testing laboratory found that 300 drugs out of 5,000 were of counterfeit or very low quality (Chowdhury et al., 2011, Shill and Das, 2011).

³⁰ Hanif et al, in their case study of a children's hospital in Dhaka, concluded that paracetamol elixirs containing diethylene glycol (a highly toxic organic substance) as a diluent were responsible for a large outbreak of fatal renal failure (Hanif et al., 1995). In the 12 months following a government ban on paracetamol elixir, the numbers of unexplained renal failure decreased by 84% in the hospital studied (Hanif et al., 1995). Despite the ban in 2009 a company was found to have continued to add diethylene glycol into paracetamol syrup resulting in the death of at least 25 children (Shill and Das, 2011).

When examining therapies sent from Bangladesh to the UK, food-medicines are the most common and include neem (*Azadirachta indica*), rojat (*Ocimum gratissimum*) and tunimankuni (*Centella asiatica*). These food plants are less widely available (neem, rojat) or not available (tunimankuni) in the UK. Neem and rojat are not available in their fresh form in the UK. Thus sending over these plants does indeed expand the medicine-scape as well as contributing to the wider Bengali-British food-scape. Rosa has fresh neem leaves sent to her that she uses for her acne, as advised by her mother in-law in Bangladesh; again, this is indicative of an increased medicine-scape and transnational therapy network available to her. A less common example is Happy's sister in the UK, who has not only neem but also her sister's Apitherapy ointments sent over from Bangladesh on Happy's advice (an Apitherapy practitioner). A *kobiraj* (healer) who owns a shop in Sylhet *bazaar* informed me that he has many Londoni patients, several of whom contact him on the advice of relatives in Sylhet, particularly when they do not find any other treatments to be effective. Others in London (as well as Sylhet) were sceptical of the effectiveness and quality (many expressed concern at it being 'dangerous') of *kobiraji oshud* (the 'traditional' healer's medicine). Thus quality is important and perceptions of medication certainly vary across families and individuals. As highlighted, the actual sending over of physical medicines is relatively rare, however advice is not; medicines sent over are embodiments of the wider therapy and familial networks that inhabit the Bengali-British space.

When examining the nature of medicinal exchange, these examples illustrate that they are on one level practical and on another indicative of transnational networks. Like gifts, they are also personal. These therapy networks, partly due to the nature of the sample, appear to be feminine. Codesal et al., (2011), in looking at transnational exchange in a comparison of Ecuador-USA and Albania-Greece, stress that exchanges are often embedded in structural dependency relationships as well as gender relations.

5.6 Theoretical concepts: power, capital and Bourdieu

When examining the flows of material across seas, the concept of 'capital' is a useful one. The term 'capital' is most associated with the French sociologist Pierre Bourdieu who theorised that different forms of capital (economic, social, cultural and symbolic) are means of promoting social advantage and differentiation (Bourdieu, 1986, Jenkins, 2002). Critical to understanding the various forms of

capital are the concepts of 'habitus' and 'field' which are embedded in social structures and power relations. The 'field', in Bourdieu's terms, is a site in which struggles over resources occur, and the positions of agents (or individuals) within the field are a result of the rules in the field and the agent's 'habitus'. Social fields may be varied and overlapping (home, work, education, employment for example). According to Bourdieu, "in order for a field to function there have to be stakes and people prepared to play the game, endowed with the habitus that implies knowledge and recognition of the immanent laws of the field, the stakes, and so on" (1993:72). The 'habitus' is both a result and a consequence of the 'field' (Jenkins, 2002). In summarising Bourdieu's concept of 'habitus', Lupton describes it as a "pattern of unconscious preferences, classification, systems/schemes and taken for granted choices which differ between groups and distinguish one from the other" (Lupton, 2012:40). The habitus is created from what Bourdieu labelled the 'doxa', which is a shared system of meaning and logic (Bourdieu, 1977). A shared belief system and 'habitus' legitimises capital; capital is needed to progress in a field(s). In its most general sense, 'capital' refers to the different means of promoting social advantage and differentiation (Silva and Edwards, 2004). Bourdieu stated that there are four principle types of capital in each field, namely economic, social (valuable interpersonal relationships), cultural (knowledge, for example in the form of education), and symbolic (prestige, honour and titles) (Bourdieu, 1986, Jenkins, 2002). The different forms of capital vary according to context, fields and theorists. Power is a critical concept here. Later in the thesis, particularly when looking at health, I draw on Foucault's analysis of power. Foucault conceptualised subjects as the passive agents with passive bodies through which power can be prescribed by disciplinary technologies (Foucault, 1977). Public health campaigns, schools and the media can all be interpreted as disciplinary technologies exercised by the state. While this conceptualisation of power is useful, particularly when exploring how power may be inscribed on bodies through self-regulation of the body via diet and exercise (Lupton, 1996), it essentially views subjects of power as passive agents. Bourdieu, in contrast, does ascribe some degree of agency to a subject as a person's habitus is both the result and consequence of its surroundings; the subject therefore is neither a completely passive creation of disciplinary surroundings nor is s/he fully conscious of the surroundings (Zeitlyn, 2010). Bourdieu's analysis of power is not completely unproblematic, particularly in understanding resistance to power and, as much of his analysis relates to the nation state, transnational subjects and communities are subject to much wider influences beyond these government borders (Zeitlyn, 2010). However, the analysis is useful particularly in understanding the existence of power, and subjects, not merely as fully aware and conscious but also as subject to far greater structures.

While 'capitals' may be interpreted differently, in this thesis it is used in a very broad sense, as valued

resources (cultural, social, symbolic) which may help one progress in a particular social space or 'field'. When looking at taste, we can see how some of these concepts play out; in Bourdieu's work on tastes in food, he illustrates how consumption rituals taught in the home are reflective of different philosophies and reproduce class and gender roles (Bourdieu, 1984). For example, the higher classes tend towards more 'healthy', 'natural' ingredients (yoghurts, salads) with the 'cheap', 'filling' food items being for those lower on social and economic capital (Lupton, 1996). The concept of social capital has also been highlighted as important for public health (Lomas, 1998, Carpiano, 2006), particularly in terms of community organisation and networks. Putnan's (1998, 2000) conceptualisation of social capital has been the most influential; he interprets social capital as the compromising of interpersonal trust, social engagement and participation, which can be used to have beneficial health outcomes (Carpiano, 2005, Putman, 2000). Putnan's definition focuses more on social cohesion than actual resources traditionally associated with capital; while his approach has been criticised for at times being inconsistent and not highlighting negative power issues (Carpiano, 2006), it is useful to conceptualise the importance of networks. When looking at British Bengalis, Zeitlyn (2010) highlights how wealth can be exchanged for social and cultural capital, for example through marrying into high status families, funding Mosques in Sylhet and holding expensive wedding parties. My research does not offer a critique of concepts of capital, power and habitus but rather draws on them to look at how various resources or capitals are exchanged and valued. By using this framework we can begin to understand them and their resulting impact.

5.7 Capital and transnational exchange in context

How do these concepts relate to my work? I begin with the premise that the individuals in the research do have individual agency while still being subject to wider forces and social conditioning (the 'habitus'). The influence of family, schooling (or lack of), the media and health professionals are evident among the participants of the study. These influences contribute to a shared logic and belief system ('doxa'), thereby providing some explanation as to the values and behaviour people display. While I assume that the participants share an internalised belief system, there are clear variations in values and beliefs particularly across national and generational boundaries (which will be examined in the thesis); however, the participants in this work do share familial networks and multiple influences in a transnational space(s). When exploring concepts of 'capital' in transnational exchange, my research concurs with earlier research that highlights British-based Bengalis invest social capital in Sylhet through mosques, schools, malls, businesses and grand building work

(Gardner, 2002, Zeitlyn, 2010). During fieldwork in Sylhet, the presence of this kind of 'capital' was frequently commented upon by Londonis and non-Londonis alike and I would frequently be shown building work belonging to Londoni families. When visiting Lili's family in a village on the border of Sunamganj and Sylhet Upazillas (sub-divisions) I was told about a prominent Londoni who helped Lili, her family and many others to get to the UK. *"He is a very good man, he helps our village. He built the road here and funded a mosque"*, Lili's sister told me enthusiastically. As well as a visible impact on the land, such stories feed into a perception of wealth. However it is not only these physical structures that feed this view of wealth. Below is an extract from an interview with two participants in Sylhet which is illustrative of some of the perceptions of the gifts brought from Londonis:

Rani's mother: *They don't just send things, when they come they bring things*

Hannah: *What do they bring?*

Rani's mother: *Things we use. They bring nice saris, they bring sweaters, good things they bring them. They love all the children and bring things for them. When our mother is here, for her and for her brothers and sisters. They bring many things.....*

Rani: *Mobiles*

Hannah: *Mobile phones?*

Rani: *Laptop*

Hannah: *They bring laptops?*

Rani's mother: *That, that they want, that that they want they will bring. They are very happy, very happy*

The interview illustrates an extravagance poured out on Londoni relatives that, too, can be interpreted as a type of 'social capital'. These types of gifts perpetuate and reinforce perceptions of Londonis in the UK as wealthy. However, the power of 'gifts' or 'capital' of Londonis sent to the people in Sylhet is very much dependent on the relationship with, or distance from, the person who sent it. When Roshnara (a participant in Sylhet) uses baby soap for her grandson and dresses him in the clothes sent by her sister Shona in London, and serves me biscuits from London when I visit, it is clear that her status as someone with transnational connections has been marked by this 'capital'. However, the children in Lili's village who receive clothes that she sent have little direct link to her and are not marked out as people having transnational connections. Rather, they are beneficiaries of a Londoni's generosity; the 'capital' marks Lili and her immediate families' status. It should be noted that Londonis are not always perceived as wealthy. While previous research looking at the impact of Londonis in Sylhet has highlighted the high status of Londonis (Gardner, 1995), it became apparent

during fieldwork that many participants and others questioned the view that in 'London' or the UK people are all rich and have an easy life. There were frequent stories of life being hard in London, or statements such as "*I won't go to London, I don't want to chop onions*". Furthermore, many of the research participants did have the choice to move to London but would not as they had a life, status and income (not only 'Londoni') in Bangladesh. Londonis and non-Londonis alike would frequently describe people who exclusively relied on remittances from the UK as "*down to their haircuts*" and "*would never do a day's work*". Increasingly, there appears to be the view that migrant families benefit more than the migrants themselves. Thus the views of Londonis are diverse and changing; however, 'capital' (be it in the form of buildings, clothes, food or cosmetics) can serve to reinforce and differentiate certain Londonis as being prosperous. Returning to the impact of items sent from the UK to Sylhet, while those distant from the gifts may be seen as recipients of 'charity', for those with close connections it is a different story. This is particularly true of food. The foods found in Londoni homes sent from the UK are varied, including various sweets and treats as well as juices, jams and cereals that are scarce and/or expensive in the Bangladesh. When visiting the close relatives of Londonis in Sylhet I was frequently shown or told about these items. Occasionally I was fed dishes such as spicy pasta with Heinz sauce or given some chocolates sent from the UK. These 'foods of status' thereby mark families within a transnational elite and provide *distinction* from those who are not a part of this class of people. Happy is one such participant who showed me some of the foodstuff sent by her sister in the UK, as well as by her brothers in the USA. She also spoke about the importance of organic food and trying to avoid chemicals she feels are present in many foodstuffs in Bangladesh and perhaps abroad. Happy was one of a few participants who highlighted these concerns. She said she had learnt a lot from reading information via the internet and through discussions with relatives abroad. Her case highlights how advice, as well as the physical embodiments of foodstuffs, is important to understanding connections to the UK. Transnational networks are important in terms of how one is perceived, and the authority they bring adds weight to one's status.

So what do the numerous items taken from Bangladesh to the UK actually mean? Food is particularly popular and valued; as one participant in Bangladesh explained, "*they take some things, a lot of people like things from the desh (homeland, Bangladesh), people over there like the things. If they like something from here then they will take it.*" During fieldwork and interviews I was told about the numerous food items brought back from Bangladesh. Shahin, the daughter of a regular attendee of the Shapla centre told me, "*when my friends go to Bangladesh they bring me food, they bring snacks like chanachur (Bombay mix) and mouri (puffed rice) and vegetables. They share this*

with me". Similarly the women at the allotments spoke highly about the seeds sent back from Bangladesh; "*they are better than the ones found here*", I was told. Their produce is shared with family members and others. In this way the food and seeds brought back from Bangladesh can be interpreted as social capital as it serves to connect people and strengthen social networks; however, it is not social capital in terms of class and prestige. While Bengali food can be acquired increasingly in the UK, this on-going link to Bangladesh remains relevant. The lemons and chillies were described as "*more powerful*" than the ones found in the UK, the *shutki* (dried fish) as "*more tasty*". The freshness of food-plants (which sometimes extended to other items) is directly related to the length of time since the item has been picked and brought to the UK. Distance from Bangladesh, whether food is brought or bought, is important. While the food and seeds from *desh* are highly valued by women (and their families) in the home and certain social networks, they do not carry the same prestige as the items sent from the UK to Bangladesh. People are not marked out as more refined, of higher status or having more wealth by receiving these good from Bangladesh. However, the values attached to the food do reflect the values of a group of people; the food is from *desh*, it is 'fresh'³¹ and links one to home and families. In the subsequent chapter (Chapter 6) of the thesis I explore the importance of Bengali food in constructing the 'home here', and transnational connections to 'back home' are key to this. Food from Bangladesh has an important symbolic role as it serves to define and *distinguish* people as Bengalis.

While foodstuffs are enjoyed by all in the family units and food-medicines may benefit different members, it is often the 'older' care givers and cooks who are responsible for having them brought over. Food may be valued as 'home foods', however they do not have 'status' values as such, suggesting a power imbalance as to who decides what is of status (the dominant culture, those with economic capital). There is also an age dynamic to these interactions, particularly with food. Ruby (a younger participant in London), for instance, explained "*my parents bring back all these things*" and another explained "*I can get them here in London*". Both are younger participants that do not share their parents' interest in this exchange of foods. There could be multiple reasons for this as they do not have the same connections to *desh*, either in terms of the food or people. They are unlike their younger counterparts in Bangladesh who tend to be more interested in transnational exchange; this strengthens the argument that Londoni (from the UK) products do indeed carry greater status than Bengali items. It also illustrates how there are many factors that make an item of importance and it varies according to individuals as well as to ages, genders and groups.

³¹ While fruit and vegetables from *desh* were generally viewed as 'fresh' there were a few challenges to this perception with rumours of fruit in Sylhet being adulterated.

5.8 Food networks and capital

The meanings of exchange between the UK and Bangladesh are multi-faceted and multi-layered. The exchanges are a two-way reciprocal process that reflect as well as maintain and create transnational networks, for example through therapy networks. Many exchanges serve practical purposes; the exchange of gifts, while carrying emotion, serve to connect people and places. At a household level, values of items are due, at least in part, to the person(s) sending items as gifts which can embody and strengthen relationships. As this work by its nature focuses on women, perhaps the importance of food and some food-medicines in exchange are reflective of this. The food and therapies are those found in the home and tend to be gendered as it is women who tend to cook and care. While the exchanges between households in the UK and Bangladesh are gendered, practical and serve to connect people, they are also the product of greater social processes as well as individual agency. The 'foods of status', elaborate goods such as laptops and mobile phones and even 'powerful' medication sent from London, are indicative of wealth and status. They are 'social capital', much like the buildings, marking such families within a transnational elite, and linking families into global networks. The food and seeds sent back from Bangladesh to the UK are valued within the British-Bengali social field. Though the food transported from Bangladesh to the UK does not carry the same status (in terms of wealth and class) as the food sent the other way round it benefits social networks and contributes towards a distinct vision of home and people through reaffirming Bengali-ness.

The exchanges of items, though personal, are also indicative of much larger transnational processes and power structures. Bearing in mind their dynamic and malleable nature, this thesis explores the impact they have on households and local lives in both Sylhet and London. In London the concentration will be on the 'food-scape' in Bengali-British households, particularly in relation to public health. In Sylhet it will look at the impact of these connections regarding the food-medicine dynamics.

Chapter Six: Home, Food and Health in London

6.1 Introduction: Lili

I first met Lili in East London tending to vegetables on her allotment plot at the local city farm. Surprised by my ability to communicate with her in Bangla and my interest in her gardening, she was eager to show me what she was growing and share the fruits (quite literally) of her labour. Lili soon invited me to her home where I spent several enjoyable afternoons being fed rice and curry until I could eat no more and chatting to her two daughters. Lili's daughters do not share their mother's interest in gardening. They do enjoy her food though; the oldest daughter, now married and moved out of home, says her cooking is different to her mum's, "a bit of everything really, a variety of Bengali, though not as good as mum's, English and other dishes...today I've brought over some jolof rice and Moroccan eggs I cooked". Lili tells me that the food she cooks with vegetables she has grown is good for me as it is fresh and contains many vitamins. One of the first things I noticed about Lili's flat was the numerous edible plants on the small balcony spilling over onto the windowsills of the living spaces. There were tomatoes, numerous types of chillies, coriander, various shaks (leafy vegetables) and Aloe vera to name a few. According to Lili, unlike the other food plants, Aloe vera has additional medicinal properties: "it helps with bedne (pain) and bish (poison); you can drink it as a rosh (juice) or apply it topically to the affected area. In Bangladesh there are many plants that can be used as medicine, here there are fewer", she continued, "we learn about them from each other, like I am telling you". Lili told me she had got the allotment on the farm in order to have more space to grow her plants. Lili was proud of her plot and would take friends and family to see it and would share the produce. She spent many hours tending to her plants and would buy seeds locally, germinate them herself or have them sent from Bangladesh. Relatives would also send her snacks and shutki (dried fish) when possible; this was a two-way exchange as discovered when she gave me a bag of clothes, biscuits and other treats for her relatives when she found out I would be travelling to Bangladesh. Although she has only visited Bangladesh twice since moving to the UK in the 1980s, Lili maintains contact with her family through calls and the exchange of gifts. Though London is now her 'home' and the place she raised her four children, the presence of her 'home' in Bangladesh is evident, not least through her food and plants.

The account above is a brief explanation of my encounter with Lili, her family and her foods and plants. The issues raised by her story are key themes in this chapter. Lili's relationship with the garden and food illustrate how the mediums of plants and foods are important to the home and home-making as well as serving to create linkages with family and communities, both locally and transnationally. In this chapter, the crucial role played by plants and food from *desh* in home-making in the UK and in maintaining links with 'home' in Bangladesh is explored. The chapter looks at how food and plants vary, are maintained and re-defined across generations. It explores concepts of food, particularly in the context of health, and how they impact on changes to diet. It also examines variations and similarities in conceptions of health between health professionals and the project's participants. Finally, through a case study of the movement of the allotments on the city farm, the ways in which space, home and plants are embedded in complex social and political relations are examined. Through looking at 'Bengali' food, this chapter illustrates the impact of transnational transactions with Bangladesh explored in the previous chapter.

6.2 Participants in London

This chapter is explained through the lives of the research participants. In addition to Lili and her daughters, I draw on participant observation carried out at the city farm in east London and the Asha and Shapla centres in north London. The data presented also includes the focus group discussions at the Asha centre as well as interviews with eight women; Rosa and her aunt Shanara, Ruby and her mother, Amira and her daughter, Shona and Moni. In addition to interviewing them I spent extra time visiting with Rosa, Shona, Ruby and Ruby's mother³². I also informally visited (but did not interview) Hashi, the sister of a participant in Bangladesh. Shanara and Mohua are two older women that were participants at both the Asha and Shapla centres whom I visited at home. Lili, I met on the farm, and was a regular visitor to her home where I spent time visiting with her and her daughters.

6.3 Food as home making

Looking at issues of identity, food and home, the two key questions explored in this section are: what are the foods that are particularly important to Bengali households? And what can they tell us about place-making, transnational connectedness between 'homes' and the changing nature of food?

³² The full list of participants interviewed can be found in Appendix 1.

The food examined is that in the 'home'. When discussing home I refer to both the physical structure of a home and home as a symbolic site of belonging embedded in historical and geographical relations and meanings (Dyke, 2006, Marte, 2008). The research participants refer to 'home' now in the UK and 'home' in Bangladesh; the two homes are not mutually exclusive as they are linked both in memory and translocal on-going connectedness. Home-making is described by Bhatti (2006:21) as "an active process sought to capture individual agency and household practices in constructing and constituting the meaning and value of the home". Like home, home- and place-making are dynamic, engaging with inside and outside worlds alike. Food bought, transferred, grown and cooked serves to illuminate and define meanings of home and the people who inhabit home as well as those they interact with. Indeed food is an embodied and visceral experience that can powerfully create and re-create 'home' and 'memory' through multi-senses (Longhurst et al., 2009) and has been highlighted as a carrier of nostalgia, tradition and identity (Holtzman, 2006). Sutton (2001) argues that food is a 'cultural site' through which worlds displaced in space and time can be imagined through tangible means. Ochs and Shohet (2006:35) conceptualise cultural sites as "historically durable yet transformable, socially organized and organizing, and tempospatially situated arenas, which are laden with symbolic meanings and mediated by material artefacts." Food is highly symbolic, embedded in history and social structures, yet malleable, as both food and the people that consume food change. This research highlights how food is not only place-making and, indeed, connoting nostalgia at times, but also a fluid and transformable 'cultural site', actively connecting people to transnational communities and being redefined across space, time and generations.

6.4 Fish, rice and home

Throughout the course of the research it was evident that food is an important aspect of people's homes and lives. Food was an essential part of all visits. I was frequently questioned as to what food I liked and ate, if I liked Bengali food, what type of Bengali food it was that I liked, if I could eat fish with bones, if I was able to eat spicy food and so on and so forth. When visiting research participants at home, food was always served, preferably a rice meal, failing that tea and snacks were a minimum (serving no food was not an option). The rice meal, usually provided by older participants, typically consisted of white rice, at least one *baji* (vegetables fried in different spices), a meat and/or fish curry and *daal* (lentils). Salads would occasionally be served too. "*These are routine; curry, fish and vegetables*", explained Rosa. Home and Bengali food were spoken about

interchangeably. Among the women there were similar views as to what Bengali food consisted of; 'rice and fish' were considered quintessentially Bengali. Spices, lentils, certain vegetables, vegetables fried as *baji* with spices and various *mishtis* (sweets) were described as 'Bengali'. Despite the apparent similarities in views as to what Bengali food comprises, there was plenty of room for negotiation, as discussed later. Let us first examine those quintessential Bengali foods 'rice and fish' as they relate to home and being Bengali.

Rice as a staple food is fairly standard throughout Asia. The literal translation for 'have you eaten?' '*bhat kayachen?*' (Bangla) or '*bhat kaysoni?*' (Sylheti) is 'have you eaten rice?'. White rice is eaten most frequently and is normally the rice that is referred to, though rice does come in multiple forms. Brown rice, though healthier, does not taste as good as white rice, some of the women at the Shapla centre explained. Visiting the daughter of a woman at the Shapla centre, her eight-year-old son told me he should eat his rice so that he can be "*big and strong*". Indeed, from a young age children are fed rice – often *kitchuri* (rice cooked with lentils, potatoes and mild spices) as it is soft, digestible, with few spices, and therefore suitable for a child. *Kitchuri* is also fed to the sick and elderly for these reasons. In various forms it is eaten in the home (perhaps with more spices and different vegetables). Rice as *jau* (rice boiled for a long period with a lot of water creating a semi-liquid preparation) is used to treat the sick. For special occasions, *pilau* rice (basmati rice cooked with *ghee* and seasoned with cardamom, bay leaves and other mild spices) and/or *biryani* (*pilau* and meat cooked together) are eaten. The increase in one's diet of *pilau* and *biryani* is generally related to an increase in wealth; it was remarked by a participant that the intake of this type of rice is also related to migration to the UK. This is something I too have observed. Rice is indeed a medium with many purposes and upon which meanings can be ascribed. The multiple forms and uses of rice indicate the importance of rice. However, it is the normal everyday white rice that is the staple associated with home. All apart from one of the interviewees said they ate rice at least once a day. This is consistent with research observations. The participants would eat rice at home, cooked either by themselves or by their mother or relatives. Shona spoke about sometimes just 'needing' rice after she got home from work, "*we eat once a day or sometimes twice a day isn't it? It depends on how you want to, how you are feeling. Sometimes I come home and I feel like I don't need anything, I need rice, that's it! Even a small amount*". The younger participants spoke of their mothers cooking 'rice and curry' and insisting on serving them rice at meal times; rice is not only a staple but also a dish of comfort and the home. The importance of rice among both older and younger generations of Bengalis is consistent with other research in the area (Chowdhury et al., 2000, Lofink, 2012).

While rice is a staple food, it is always accompanied by other items. 'Fish', curried or sometimes fried, is strongly associated with Bengali food; this is true in terms of the 'wider Bengal' and not only Bangladesh (Ray, 2004). There are numerous Bengali fish with *Ilish* (hilsha) being the fish most associated with the region, both in terms of its distinctive taste and high levels of tiny bones making it difficult to eat for those not used to it. "*The more bones, the tastier the fish*", I was told by participants. Older participants were pleased when I told them I enjoyed fish in Bangladesh, and they were impressed that I could eat *Ilish*. Being able to eat fish with lots of bones, for many, was a sign of spending time in *desh*. *Shutki*, which is dried fish known both for its taste and strong smell, is also thought to be distinctively Bengali. It is often transported from Bangladesh, is considered tasty and is highly valued. Neither *Ilish* nor *shutki* would be found in mainstream 'Indian' (Bengali-run) restaurants. As 'insider foods' it is expected that 'outsiders' will not like them or find them difficult to eat (due to the bones or strong smell). The older participants describe eating them in Bangladesh and continue to do so here; the attitude of younger participants to fish was generally more ambivalent, however. Ruby reported that she does not like fish; however, she also said she is not a great fan of Bengali food in general. Shona, however, when talking about her teenage daughter and her daughter's peers said, "*everyone loves fish...they (the younger generations) like it much better than us...they're worried about the bones, but without the bones they love it*". Another participant at the Asha centre described how she cooks cod (an 'English' fish) in curry. These examples illustrate how food adapts and changes; even food as 'Bengali' as fish changes as people cook different types of fish or favour fish with fewer bones. Whether new forms of 'insider foods' will emerge and the popularity of *Ilish* and *shutki* will decline remains to be seen.

6.5 Travelling food

Spices, vegetables and fish are found in shops and supermarkets throughout London. In east London, 'Bangla town' has several shops catering specifically to Bengali tastes selling food items such as *Ilish mach*, *shutki* and *deshi* (from Bangladesh) chicken. In addition to more generic halal butchers, 'Bangla marts' are cropping up throughout London. Indeed, there is a whole industry catering for the needs of Bengali food tastes in the UK. As one participant in a focus group explained, there is no longer any need to have food brought over from Bangladesh. However, while people do frequent these shops, most reported either themselves or members of their families bringing over foodstuffs. Vegetables, fruit, *paan* (piper betel) and its accompanying *shupori* or *goa* (*Areca catechu*, betel nut), *shutki*, sweets, snacks such as *pittas* (Bengali flatcakes), *mouri* (puffed rice), *chanachur*

(Bombay mix) and certain spices were all reported to be brought over through informal channels and relatives (as described in chapter 5). The items sent back are not depended upon as a regular food supply but rather are sent as and when possible. As explored in the previous chapter, the reasons for these regular exchanges are not straightforward and vary across individuals and families. The different foods sent over can tell us different reasons as to why food is sent from Bangladesh and how this exchange contributes to connectedness and transnational food-scapes.

Some of the items sent from Bangladesh are more expensive and difficult to acquire in the UK, such as seasonal fruit, certain vegetables and differing forms of *shutki* (dried fish). An increase in choice of foods in Bangladesh is an important reason for exchange as the example of *shutki* illustrates. While few people, even in Bangladesh, prepare their own *shutki*; there is a much greater choice of *shutki*, prepared and fermented differently, in Bangladesh than in London. Seasonal fruit and vegetables too are frequently sent over. For example, Ruby's mother said she has coconuts and bananas sent from Bangladesh when the opportunity arises. While these are available in the UK, Ruby's mother explained they are more expensive, and not as 'fresh' as those in Bangladesh. When going to Bangladesh on a trip I was given a list of vegetables to bring back by the daughter-in-law of a woman at the Shapla centre: "*but make sure you buy them the day before you return so they are still fresh when you give them to us*", I was told. As with Ruby's mother, the freshness of food is considered important. This applies not only to vegetables but also to fish and other products, as the following extract from the interview with Shahanna reveals;

Hannah: *Why do you take from that country to this country? Can you not get it here?*

Shahanna: *I like to eat the food from desh, it's tasty, and here they bring it, how long does it sit before they throw it away we don't know*

Hannah: *Ok, so that is fresh?*

Shahanna: *Do you know what my mama (maternal uncle) does? He fries fish and brings it back from Bangladesh here, you understand? Then it is very tasty. If he fries it he thinks the taste stays in, so he fries it and then brings it to eat*

Taste and freshness are closely related. Fresh food tastes better. As Bangladesh is the source of Bengali food, having food sent from Bangladesh is considered more 'fresh' and 'tasty'. While the exchange of these foodstuffs suggests a benefit in terms of greater choice as well as taste and the value of freshness (discussed in greater detail later) I suggest there is another dimension to this exchange: that is maintaining and reinforcing personal connections through gift exchange.

Through the exchange of products, a connectedness between the two homes is maintained and strengthened. Gifts such as homemade *pittas* (Bengali flat cakes) and snacks such as *chanachur* (Bombay mix) and *mishtis* (sweets), which are often taken as gifts to people's homes, suggest food is sent with emotion rather than for practical reasons only. Shona, when describing the homemade items sent from her relatives in Bangladesh, says “*they send us things we like, home made things, that’s the difference*”. Such descriptions highlight the importance of the personal in transnational exchange. Sutton (2001), in his book looking at food on Kalymnos, examines the importance of food as gifts; the generosity they entail, he argues, are a key site for elaborating group identity and communal memories. This too appears to be the case in this research, as gifts and generosity reinforce a sense of connectedness. As explained in the previous chapter, foods as gifts are sent with meaning and emotion (Alexeyeff, 2004) serving to maintain familial connections (and kinship relations) (Mauss, 1984) across seas, a food from another ‘home’, reinforcing and maintaining a transnational connectedness. An added dimension to this exchange that cannot be disentangled from the other reasons for exchange (practicalities, taste, freshness and gifts), is the symbolic. Bengali food from ‘Bangladesh’ connects people to Bangladesh and it embodies tastes from *desh* and reinforces a sense of Bengali-ness. This is succinctly expressed by Shahanna when I ask her why she has food brought over from Bangladesh, and why she consumes what she does: “*We are Bengali, we like this food*”.

Food from Bangladesh is the source of Bengali food and, therefore, is more likely to be fresh and tasty. The exchange of particularly home foods, rather than merely fulfilling a practical need as such, serves to connect the UK based Bengalis to *desh* and family there now. Food is sent with love and the taste is enjoyed. Thus this research demonstrates how the regular exchange of food between the two transnational local places enriches and adds an extra dimension to the food-scape in the ‘home’ in the UK while serving to remain connected to ‘home’ in Bangladesh.

6.6 Changing food

The transnational exchange of food produce is generally an activity involving the mothers, fathers, uncles and aunts of those born and brought up in the UK. While the younger participants interviewed are not actively involved in the transnational exchange of food, they do consume the products sent from Bangladesh. When discussing Bengali food there was an association with

mothers and home as they spoke about eating this food at home, often prepared by their mothers. However, the food was not associated with the place Bangladesh specifically. One younger participant reported even *"rice tastes funny"* in Bangladesh; another who had moved when she was older to the UK stated *"I used to ask for food to be brought over, but you can get it all here now"*. That Bengali food is associated more with 'home' here in the UK and less with 'home' there in Bangladesh is evidence of its changing meanings across generations. The younger participants interviewed spoke of a mix and adaptation of foods, as the quotes from interviews below illustrate:

"I don't know, I just eat random...it, it depends, there might be a time where I eat more Bengali food but I think since I've moved out (of the family home) I don't eat as much Bengali food..."

(Ruby)

"we tend to eat like Western food...we eat curry"

(Amira's daughter)

The younger participants in the study, similar to Lili's eldest daughter, spoke about having a more varied and different diet than their parents, incorporating more 'English' or 'Western' food. While food at home includes Bengali food; cereals, pasta and bread described as 'English' or, more frequently as 'Western', are also eaten at home. Foods eaten outside the home include fast foods such as hamburgers, pizzas and fried chicken. Also observed and described was the consumption of Indian, Middle Eastern and Nigerian food. The incorporation of 'outside' food as well as continuing to eat food of one's parents' country is consistent with other studies looking at the eating patterns of migrants (Ray, 2004, Dyck, 2006, Vallianatos and Raine, 2008), though the meanings of these different foods do vary across contexts. When looking at food in so-called globalised cities, this eclectic mix of foods is not unusual and very much reflective of a diverse environment. While younger participants enjoyed Bengali food found at home and described it as food of comfort, they reported appreciating other food that they had access to as Londoners. This, many felt, was a key difference between their own and their parents' eating habits. However, upon closer scrutiny, this research indicates that the change in food habits and differences between 'inside' and 'outside' food is not limited to younger participants.

When being served 'typical' Bengali food I noticed many interesting adaptations. Moroccan eggs brought by Lili's daughter made it onto the table and, on one occasion, much to my horror, Brussels

sprouts were added into a curry³³. Not so subtle changes include finding two participants in their seventies from the Asha centre enjoying hamburgers in McDonalds during a trip out. These observations indicate changes in both Bengali food and the incorporation of 'other' foods into the diet of older participants. The interviews confirmed my observations. Out of the five older participants interviewed, two reported regularly eating Western food such as sandwiches, pasta, chips and pizza; the remaining three said they mostly ate rice and curries at mealtimes but reported eating cereal or other such food at breakfast and/or between meals. Additional changes in the way food is cooked were reported in both interviews and focus group discussion; examples included grilling one's food, cooking with less oil or more subtly cooking certain fish with garlic. Many of these changes were made in attempts to 'eat healthier'. Changes to food habits were not always the case; one participant spoke about how she eats *deshi* food (food from Bangladesh), though her children don't always and a son expressed frustration at his mother not making changes to her food habits. However these tended to be the exceptions rather than the rule.

We should not be surprised that food habits change; it is the why and how that are interesting. The influence of children is one explanation. When asked who cooked in the house, the unanimous response from participants interviewed was the mother; however, tastes and preferences of children and husbands were often taken into account when deciding what to cook. *"I can't imagine to eat boiled vegetables in Bangladesh, but now I can have some broccoli, my son he eats, you know, school lunch, says 'mum please give me some broccoli', so he's an inspiration"* Anushka³⁴ said. An older participant spoke about cooking fish with fewer bones for her daughter; another reported eating pasta with her daughter. However, the eating of Western food and the so-called 'adaption of Bengali food' is rarely specifically attributed to children. Different types of food can be found outside of the home and changes to food in the home are frequently made due to the added availability of varying foodstuffs and diverse food preferences. Additionally, interaction with the wider public and perceptions of health are important, and will be discussed in detail later in the chapter (section 6.8). Dyke (2006), in research conducted among Indian immigrants to Canada, argues that what is ingested articulates a dual or hyphenated identity (Indian and Canadian). In many ways this is similar to these findings, with food ingested and the effort taken to acquire foods which are associated with the home and being Bengali; however, this food is reworked and reinterpreted as new foods are acquired and old foods adapted. In London the 'new' food eaten, while sometimes described as 'English', is rarely what would be associated with 'traditional' English food but instead is reflective of a global food reworked, now common to the British food-scape.

³³ This horror was due solely to my personal dislike of Brussels sprouts.

³⁴ Anushka is the only 'younger' participant who moved to the UK as an adult.

Food is important to the home, more specifically Bengali food is important to home 'here' in the UK. It is also important to maintaining a connectedness to home 'there' for older participants. However, food and its associated meanings are re-imagined and changed through migrations and generations; this is both reflected in and serves to define the home. Thus far we have discussed how this is done in the context of interactions and connections within the home, between mother and daughter and family members and through exchange with 'home' in Bangladesh. However, what is eaten is impacted by multiple factors, not least by perceptions of health.

6.7 Acculturation, *desh* and *bidesh*

'Acculturation' of diets is mentioned in literature looking at changing food habits among migrants in the UK (Misra and Ganda, 2007). Acculturation can be broadly defined as "the process of cultural change and adaptation that occurs when individuals from different cultures come into contact" (Gibson 2001:19). When applied to international migration, the process involves both the adoption of values, behaviours and ideals of the 'host' culture while at the same time retaining values, behaviours and ideals of one's 'home' country (Schwartz et al., 2006). Unlike assimilation, acculturation is a two-way process (Jamal, 1998); Mitchell (2006), for example, explores the acculturation of the British diet as it incorporates various foods from different countries. There are varied theories on the process of acculturation, which varies according to groups, place, gender and generation (Berry, 2003, Roseberry, 1989). With food it has been argued that it is often the last thing to change among migrant groups (Jamal, 1998). The findings presented here could be interpreted in terms of acculturation, with the participants in this research apparently acculturating as diets change. However, this interpretation is slightly simplistic. The process of diets changing is nuanced and complex. While it is certainly evident that diets do change through a process of adopting the foods of a 'host' culture, in the case of London (which is by no means unique), its food-scape is itself constantly changing and consists of multiple global influences. Furthermore the 'Bengali' diet in Bangladesh is by no means salient (as the subsequent chapter, chapter 7, illustrates); it, too, is constantly changing. Additionally, there are multiple other factors that affect diet outside of 'culture/s', such as perceptions of health and socioeconomic conditions. Before looking at these other factors it may be useful to examine concepts of *desh bidesh* (home and abroad) among British Bengalis and how this may relate to changing food habits among the participants in this study.

When researching the 'British Bengali social field', the discourse of *desh bidesh* is commonly referred to. Gardner (1993) highlighted the ways in which the terms reflected meanings and discourses for those in Sylhet and the UK. *Desh* referred to the land and home and was important for group identity, meaning and belonging for Sylhetis. *Bidesh* refers to foreign lands and a source of economic and political power. Strong connections between the UK and Sylhet remain, made much easier by technology and travel allowing even closer contact within the transnational space (Zeitlyn, 2013). However, more recent discourses looking particularly at British Bengali children found that there were unclear ideas of what *desh* and *bidesh* meant, with an unclear sense of belonging, and challenges to simplistic notions of home and away (Mand, 2010, Gardner and Mand, 2012, Zeitlyn, 2013). Zeitlyn (2013) argues that notions of *desh* and *bidesh* are less significant than previously, with British Bengalis being embedded in many transnational social fields (not only the British Bengali one). He cites the Islamic *Umma* (an Islamist interpretation of faith) and Bollywood films as examples of other global influences. Zeitlyn's work, however, does focus on younger generations of British Bengalis. When looking at how these concepts of *desh bidesh* may apply to my work it is evident that there are clear generational differences. While *desh* does remain symbolically important for the older participants in this study, younger participants are more ambivalent, with their connection to *desh* being largely connected with their parents. Furthermore, they (and their parents) are increasingly influenced by the global transnational foods now available in London; thus the global influences are indeed important to food consumed.

6.8 Food, health and diet

Public health messages regarding diet penetrate women's lives via the media, schools, community centres and GP surgeries. During participant observation, interviews and focus groups, many of these messages were reiterated. Dietary advice was generally highly valued and rarely questioned by participants. Furthermore there was generally a consistency between the participants' views and diet-focused public health messages. Participants classified foods in terms of specific nutrients and food groups (such as protein, carbohydrates, dairy, vegetables, fruit, etc.). Participants generally agreed that one's diet should include plenty of vegetables and some fruit if possible as well as limiting oil and *ghee* (clarified butter) intake. Avoiding spice and salt were also mentioned by a few participants, as was avoiding fast food by one or two participants. Despite the importance of rice, many women did speak of the need to reduce rice consumption by having smaller portions and/or having only one rice meal per day (as opposed to two or three). There was occasionally some

confusion over health messages; for example, during a health session at the Shapla centre, there was a debate as to whether red meat should be eaten and how much.

Despite a basic level of knowledge regarding standard nutritional advice not all the women reported taking health advice, or the extent to which it was taken varied. Food was frequently spoken about in the context of health conditions, and some of the women spoke about how they were advised to change their eating habits after a diagnosis of diabetes or high cholesterol. Examples include Amira, who described herself as *"on a diet"* since being told that she has diabetes, high cholesterol and heart problems; she has consequently reduced her rice and sugar intake. Evidence across ethnic groups suggests people tend to be motivated by 'treatment' rather than 'prevention' (Satia et al., 2001, Satia and Galanko, 2007); for this reason, eating patterns may change post-diagnosis. A few participants appeared to pay little attention to health messages in practice. Additionally, children and professionals frequently expressed frustration at the older participants' 'unhealthy' eating habits. A lack of correlation between 'rationale' in terms of biomedical nutritional value and food choice is not uncommon, as there are complex social, political, cultural, economic and physical factors that affect food habits and preferences. The 'cultural' factor is one that was often identified by professionals and also mothers and daughters, the 'cultural factor' being that 'Bengali food' was frequently synonymous with 'unhealthy' food. High levels of oil, *ghee*, salt and sweets were viewed as inherent to Bengali food and being particularly consumed by older participants. The following quotes by participants and professionals illustrate how 'Bengali' food is often perceived:

"I know in other Bengali households they use a lot of oil, and they do cook a lot of red meat."

(Ruby)

"With my mother, and you will find with a lot of Bengalis, they are unwilling to change their habits. My mother eats a lot of rice, ghee and meat. The vegetables that are eaten are often overcooked."

(Moni's son)

"There is a lot of spice and oil in Indian and Bengali food. They need more salads, yoghurt and cucumber dishes."

(Worker at the Shapla centre)

Research into Bengali food habits in the UK agrees with these views to some extent. Chowdhury et al (2000) find an increase in meat, spices, oils, sweets and biscuits in one's diet on migration to the UK, with vegetables, rice and fish continuing to be popular. Grace et al (2008), when looking at diets of Bengalis in the context of diabetes, discusses the importance of 'special foods' such as *biryani* and *mishtis*. During fieldwork women did talk about salt, white rice and oil making food 'tasty' and, similar to Grace et al., (2008)'s findings, 'special' food as important for entertainment and social occasions. Thus there is a clear rationale for concern regarding the 'Bengali' diet and why 'cultural' factors are important to this. However, despite 'unhealthy' aspects of the 'Bengali diet' (high levels of oil, *ghee*, salt etc.), 'Bengali' food is not inherently unhealthy according to standard biomedical advice; it contains fish, plenty of vegetables and fruit, pulses and lentils, all of which are recommended by health professionals. However, there was rarely any mention of the 'healthy' aspects of the 'Bengali' diet. Another point that should be mentioned is that the concept of a unified 'Bengali diet' is in many ways misleading. As highlighted above, while many foods are considered 'Bengali', the nature of 'Bengali' food is not static but changing and fluid, varying across individuals, families, ages and across seas. The possible structural, practical and socioeconomic factors that affect one's diet were rarely mentioned during the research period thereby placing the responsibility for diet entirely on individuals and their 'culture'. Before looking at why these narratives may exist, it is worth briefly looking at another piece of research that had similar findings in terms of one's 'own' food being perceived as unhealthy. Jamal (1998), looking at British Pakistani diets in Bradford, found different perceptions towards 'English' and 'Pakistani' food, with key generational and gender differences. Older British Pakistanis perceived their food to be oily, tasty but problematic, and English food as bland but healthy. This is not dissimilar to my research, particularly in regards to how participants regarded their own food. Jamal (1998) also found that younger British Pakistanis are increasingly consuming mainstream English food alongside Pakistani food. Again this is not dissimilar to my research, though I argue that change in food occurs with both older and younger participants. While the findings to this research are interesting, Jamal (1998) does not go into any great depth as to why Pakistani food may be perceived as 'unhealthy' and English food as 'healthy'. Returning to this research, I suggest an underlying power imbalance in negative perceptions of Bengali food.

When unpicking narratives of 'good' food and 'bad' food (or 'healthy' and 'unhealthy') values, particularly in the context of ethnic identities, many issues are illuminated. They indicate key power imbalances between and within groups, unhelpful judgements made on people and a general lack of dialogue between professionals and the research participants. Moral judgements and disempowerment of individuals through the food they consume have been raised by academics.

Foucault argued that power was inscribed on bodies through self-regulation of the body via diet and exercise (Foucault, 1980). Building on Foucault's work, Conveney (2006) looks at the emergence of nutrition as a science and a morality in Western civilisation. Discourses of 'good' and 'bad' food have moral implications creating 'good' and 'bad' citizens and parents. When values are attached to ideas of ethnicity and culture there is an added dimension. By racialising health and food, there is a danger of creating a different 'other'; indeed scientific research has a legacy of justifying difference through research, often justifying and/or legitimising oppressive power structures (Bhopal, 1997). Chatterji (1996), when looking at modernity as applied to post-colonialist India and the pervasive view of a lack of nutrition in Indian food, links this to a wider argument regarding an Indian modernity of the 'once-colonised', and a difficulty in being independent subjects in their own rights. While the context of my research is different, the moral undertones discussed by Conveney (2006) emerge similarly in this research. By highlighting Bengali food as 'bad' or 'unhealthy', it suggests those who consume such food are themselves unhealthy and need to change. When observing the continual identification of Bengali food as 'bad', and different food habits being viewed negatively, as well as top-down approaches in delivering health messages with little two-way dialogue, key power differences between healthcare professionals and participants are apparent; we can also begin to see the 'other' (unhealthy, inferior, Bengali) being created. The picture is made more complex as many participants and Bengali health professionals also subscribe to this view of Bengali food as unhealthy. With professional knowledge having added weight and being viewed as 'better' than lay knowledge, it is difficult to challenge, or even to express one's lay knowledge; it must be noted that this is not only a challenge with Bengalis, but with lay versus professional knowledge in general (Scott, 2009). However, linguistic and class differences may make difficulties in dialogue, translation and interpretation even greater.

We are thus caught in a dilemma. 'Cultural' issues and links to home are important to understanding the different diets people consume and providing inclusive public health services that cater to all members of the community. However, by focusing on the diets of other groups there are very real risks of stigmatising and labelling not only the food people consume but also the people themselves. Bhopal (2007) suggests several considerations to be borne in mind, in order to move away from harmful labelling practices in health research and ethnicity. They include the need to recognise the risks of ethnocentricity in research, to look at the importance of wider socio-economic factors in contributing to poor health, the need to recognise differences between individuals as well as the changing and fluid nature of ethnicity and a sensitive approach overall with a clear rationale (Bhopal, 2007). These principles can be applied to working with minority groups, including Bengalis. In the

context of Bengali women it is vital that their wider socio-economic conditions are considered, as well as to adopt a sensitive approach to discussion of eating habits. Greater value needs to be placed on lay eating habits and beliefs, as by subscribing to and reiterating views of the lack of nutritional value in Bengali food, existing power imbalances are maintained. In moving towards dialogue it is important to understand both the wider socio-economic conditions involved in 'poor' health and eating habits as well as the layered 'lay' understandings of food in the context of health. Before looking at 'lay' perceptions of health in the Bengali-British context, I will first outline some of the wider socio-economic and structural issues as applied to the research participants, as it is important to be aware of health and diet within this wider socio-economic context.

6.9 Placing diet in a wider context: structural and socio-economic considerations

Since the renowned Black report (1980), the link between socioeconomic conditions and health inequalities has been widely acknowledged. Subsequent research in industrialised countries has found that disadvantaged economic groups are more likely to suffer from diet-related diseases (Drewnowski and Darmon, 2005). Diet, health and socioeconomic conditions are closely related and difficult to disentangle. It is therefore important to look at some of the structural and practical factors involved in the health of participants. As explored earlier, the research found that participants do have reasonable levels of knowledge in regards to 'healthy' eating in terms of standard nutritional advice. In addition, they have their own lay understandings of food (discussed in the subsequent section, section 6.8), which are frequently complementary to standard nutritional advice. Grace et al., (2008), through qualitative research among Bengalis, found that rather than knowledge being a barrier to healthy lifestyle choices, it was often structural and practical constraints that were the greater barriers. These constraints included lack of time and money, difficulties finding childcare, difficulties in travel, lack of fluency in English and the expense of certain vegetables.

The research participants raised several structural issues that could affect their health and access to services. Several did have to be careful in the management of their finances. Lili, whose husband died a few years previously, had three teenage children living with her, one in college and two unemployed. She detailed her budget (pension and housing benefits) and how she tried to manage. Shona, too, is a single mother; she has one teenage daughter in school and a younger brother out of

work. She works two part-time jobs in order to support them. While none of the women describe themselves as 'poor', finances are often a strain and require careful balancing of household budgets. The older women tended to eat 'Bengali' vegetables (though there was much overlap with 'Western' vegetables and they did not eat exclusively 'Bengali' vegetables). However, there is a preference for certain seasonal vegetables (for example, many of the *shaks* [leafy vegetables]) which may not be available out of season and, if they are, tend to be more expensive.

When looking at access to health services, several issues were raised and observed. Many of the older women at the community centres were elderly with health problems; due to this, and a lack of fluency in English, using public transport could be taxing. To come to the community centres several relied on the transport provided. To go out, many women would rely on relatives to accompany or, occasionally, drive them. For many women there was a general lack of social spaces to go to, particularly if family members did not live close by. The city farm, for those nearby, provided an important social space, as did the community centres. However, much of this was found out through word of mouth. Both the Shapla and Asha centre had very popular exercise sessions geared towards older women. While women at the community centres enjoyed these sessions and were well aware of the benefits of exercise, such spaces for exercise, for older women, were rare. Many said there were few spaces just to walk in local neighbourhoods; cold weather was also a factor in putting people off walking for exercise. In terms of access to health services, a lack of fluency in English was a barrier. While the women would talk about visiting their GPs they would need to rely on translators and relatives, which could be problematic. Shanara and Mohua, two regular attendees of both the Asha and Shapla centres, for example, were on a range of medications. I discovered this one day when they asked me to help them fill out some forms for the centre. Neither, however, were clear as to why they were on several of the pills. They had been prescribed at different times, and a lack of fluency in spoken English and illiteracy in written English meant many times they got information second- and third-hand. Furthermore, in a climate of government funding cuts, the community centres which they all enjoyed visiting were hit. In July 2010 there was talk of the exercise class being stopped at the Asha centre due to the council saying they could not pay the teacher. By early 2012, all the staff had been reduced to working part-time though the Bengali women's group continued. The Shapla centre, however, was not so fortunate. By the autumn of 2011, the transport to this community centre was cut; following this, coupled with other cuts and the retirement of the person who ran the group, eventually the 'Bengali women's group' stopped. The issues raised by the participants illustrate complex economic, 'cultural' and political factors affecting people's general wellbeing and health.

When examining the habits of daughters there is a different picture as they face different issues. They also suffered from fewer ailments (this is likely to be related to age). They tended to be of a similar, or better, socioeconomic status than their parents. While some were at home, others were financially independent from their parents and worked full-time (two of the three interviewed). For those living at home they were likely to eat food similar to their parents, at least some of the time. However, all felt that they ate a greater range of food than their parents. Furthermore, they had a greater confidence in their 'health knowledge' and healthy eating habits. Having grown up in the UK they did not face language difficulties and felt better able to navigate the health system. Education is perhaps an important factor in giving them greater confidence in such knowledge. Of the three pairs interviewed, one daughter completed school and dropped out of university after two years of a degree course, another had completed a MA, and the third was in her final year of school. Of the two older participants interviewed without their daughters, one had a daughter in school and the other only sons (in school and working). Lili had one daughter in college and another who had completed a BA (neither of her sons had done well in school, and they were looking for work). There were several examples of women at the farm and community centres whose daughters did well at school and had found employment or gone onto university. While this sample is small there is evidence of Bengali girls rapidly improving in educational attainment, which concurs with my findings. In their analysis of data, Smith et al., (2009) found that among first generation migrants, 64% of Bengalis had no educational qualifications whereas among second generations only 21% had no educational qualification. This improvement is particularly evident among females, with an 83% increase in university applications from Bengali girls between 1994 and 1999 (Phillipson et al., 2003). In Tower Hamlets (the place with the highest concentration of Bengalis in the country), there has been significant improvement with Bengalis doing better educationally than their white counterparts (Phillipson et al., 2003). When looking at health, Smith et al., (2009) found that Bengalis were the only minority group explored that demonstrated significant intergenerational improvement in general health; four of the other groups had shown worse health in the second generation. It was suggested that this could be explained as the general health of Bengalis being worse than all other groups, thus there was far greater scope for improvement in the second generation (Smith et al., 2009); however, this does not really explain why there is such a marked improvement, especially considering the lack of upward mobility. While by no means conclusive, I suggest that an improvement in conditions and education combined with literacy, younger bodies and fluency in English is 'health capital' possessed by daughters in the study, enabling them to navigate health systems and implement health practices contributing to a marked improvement in their health.

6.10 'Lay' understandings of food and diet

Moving on from simplistic perceptions of Bengali food being equated with 'un-healthiness', the research found that in addition to notions of nutritional value, there are multiple other expressions of goodness and health as well as different dietary advice. Looking first at alternative food groups I drew on the work of Chowdhury et al., (2000), on Bengali food groups. From in-depth research, Chowdhury et al., (2000) found a distinctly Bengali food classification system emphasising balance, and a relation to Ayurveda (though different to it). The foods were classified as 'strong' and 'weak', 'digestible' and 'indigestible', and the different food groups were appropriate for the sick, the old, the weak and the strong. During my fieldwork I found little evidence of these food group classifications. When I asked about them during focus group discussions and interviews, there was some confusion. However, 'digestible' foods for people of a certain constitution were spoken about. If someone is sick, old or young they are often recommended 'soft' food as it is easily digestible and therefore easy to eat. 'Soft' food includes rice made as *jau* or *kitchuri*, milk, lentils and spinach³⁵. This food is literally soft and has a reduced amount of spice. It was described by participants as "*easy to digest*". For very young children it is these foods (particularly *kitchuri*) that they are weaned onto from milk; as food that is easy to digest they serve as an introduction to food. For the old, I was told by several participants that they can "*eat what they like*". However, if food becomes difficult to eat or digest then it is the soft food that they tend to eat. For the sick, *kitchuri* particularly is given as it is nutritious (particularly when vegetables are added) and is easy to digest. Rice as *jau* has medicinal purposes, being commonly used as an oral rehydration. Food in contrast that is hard or 'strong' is suitable for most (the well and not too old), and includes meats or rice cooked as *pilau* or *biryani*. These foods are physically more 'hard' (such as meat), and richer in oils and spices. Strong foods were rarely spoken about; one or two participants discussed them only when asked specifically, and they were measured in contrast to the digestible food. In terms of alternative food groups 'soft' and 'strong' food are similar to Chowdhury et al., (2000), however the lay understandings did not have nearly the detail of Chowdhury (and colleagues)'s work. This could be because they are very much on a theoretical level; in terms of practicalities it is the 'soft' food that is fed to those who need it.

Other concepts of health that are valued include food being 'fresh', having a balance and certain Bengali vegetables being perceived as particularly healthy. Participants in a focus group and in two of the interviews spoke about 'balance' in terms of having different types of food or "*a bit of everything*" and not overeating. This is consistent with Chowdhury et al., (2000), as they discuss the

³⁵ 'Soft' and 'digestible' food is discussed in greater detail in chapter 7.

Ayurvedic concept of balance being important for their participants in terms of avoiding overeating and excreting as well as having a mix of food, suggesting it has parallels with the biomedical notion of homeostasis. Fresh food is food cooked and consumed soon after it is plucked or killed. With food bought, it is hard to tell how long it has been since it was alive and therefore to what extent the freshness of it has decreased. While cooking food helps preserve freshness, it was felt to be important to ideally eat food on the same day it is cooked. While food from Bangladesh was, by some, considered to be fresh (as discussed in section 6.5), the transportation did cause it to lose some of its freshness as Lili and her friend explained to me. Many participants pointed to home grown vegetables as 'fresh', a theme developed by the gardeners on the farm (see subsequent section, section 6.11). At an interview with Shona I was told that vegetables grown by oneself are "fresh" and that "if you grow fresh tomatoes and coriander it will be difficult for you to eat them from a shop." She spoke about the juice coming out of the tomato as a sign of the freshness. To be able to pluck a plant straight from its source, not having to transport and store it and eat it on the same day, accounts for the freshness of home-grown vegetables. The link between 'freshness' and 'health' was reiterated several times. Why, exactly, was not always clear. Transportation did cause it to lose some of its goodness and 'vitamins'. Fresh food is "full of vitamins", explained a participant. Garden vegetables having vitamins was highlighted by several participants. While vitamins were often referred to in general terms by most participants, when attending a gardening club in East London I was told about specific vitamins found in different vegetables (vitamins A and D were highlighted). This 'freshness' and thereby 'goodness' of the plants adds an extra dimension to gardening that will be discussed in greater depth in the next section (section 6.11). The combining of concepts of 'freshness' with 'vitamins' is an example of how knowledge is transferred and incorporates differing meanings; *'age kota'* (previous knowledge) and *'ekone kota'* (present knowledge) are combined. In addition to the concept of 'freshness', there appear to be certain food-plants that are particularly valued. They are those that have added medicinal and health benefits such as neem and *korala* (*Momordica charantia*, bitter gourd). These vegetables are frequently described as 'Bengali' and relate to those found in traditional medicinal remedies in Bangladesh.

Among younger participants there was less evidence of these alternative values of health, however when present they would take on new meanings. An example of this would be that 'fresh' food was highly valued by several younger participants. Ruby (a participant in her early twenties, born and brought up in London) said this was something she had learnt from her mother, though she now equates it with being 'organic', something she had learnt in the UK which she feels is important to a healthy diet.

Findings of differing perceptions of healthy food are consistent with other research among migrant groups. Park et al., (2011), in their study of Latino women in New York City, explored concepts of health not being expressed purely in terms of nutritional status but instead through concepts such as 'freshness', 'purity' and 'naturalness'. Dyke and Dossa, (2007), in their study of Afghan and South Asian migrants to Canada, found that both groups of women combined health knowledge from their countries of origin with health messages in Canada. The women in our study did adhere to different forms of knowledge in varying degrees. However, they were less forthcoming in discussing health outside of biomedical terms; during fieldwork I was frequently asked what the 'right' answer was and basic health messages would be reiterated by the women. However, 'alternative' views were rarely in contradiction and frequently complementary. While the women had much knowledge they were only too aware of what was perceived by the outside as 'correct' knowledge, reflecting a key imbalance of power and a lack of dialogue on equal terms.

Knowledge is dynamic and changing and the body and self incorporates multiple knowledge sources. Women during a focus group discussion expressed this as they spoke about *age kota* ('previous speak/knowledge') and *ekone kota* ('present speak/knowledge') regarding the food that they previously ate, and eat now. '*Ekone kota*', as with '*age kota*', incorporates multiple influences as meanings are redefined across time and space. However, knowledge can be separated and labelled, and values and meanings ascribed. Foods, and healthy food particularly, are embodiments of knowledge and meanings.

6.11 Food and gardens

Like Lili, many of the older participants invested time, effort and money into growing plants and food. 'Bengali' vegetables grown include *lau* (*Lagenaria siceria*, bottle gourd), *lal shak* (*Amaranthus*) and other *shaks* (leafy vegetables) and *kochu* (*Colocasia esculenta*, taru), in addition to those found more commonly in the UK such as tomatoes, potatoes, onions, coriander and, occasionally, strawberries. The physical frame-like structures constructed known as *jars* (Bangla) or *sangali* (Sylheti), space permitting, that trailing plants grow up, replicate those in Bangladesh. The growing of food plants, whether on a windowsill, in a private garden, on an allotment or in community gardens, brings into sharp focus foods as home-making, parts of memory and links to 'home past', healthy eating, and the interactions of different groups of people as played out through food.

Previous research into gardening highlights gardens as social, personal and symbolic spaces. Research into reasons for gardening among the UK population has found that gardens are rich sources of social interactions as well as private havens, are sources of engagement with nature and reflect a connection to personal history and identity (Bhatti and Church, 2001, Bhatti and Church, 2004, Bhatti, 2006). Literature on migrant gardens in industrialised countries points to gardens as sites where memory is encapsulated as a lived and visceral experience, and homeland is captured through tastes, sights and smells (Morgan et al., 2005, Mazumdar and Mazumdar, 2007). However, Morgan et al. (2005), in looking at migrant gardens in Australia and Mazumdar and Mazumdar (2012), looking at gardens belonging to diaspora in California, find that in addition to being sources of memory they, too, facilitate ties and connections to their new 'home'. My research largely concurs with gardens being a site of social and symbolic importance relating to memory. However, before exploring the symbolic and social acts of gardening it is important to acknowledge that gardening, particularly vegetable gardening, is a practical act enabling one to grow food and feed one's family. It is also a practical means of acquiring 'Bengali' vegetables. When visiting a gardening club for Bengali women, the inspirational leader spoke about how, when she arrived in the 1980s from Bangladesh, there was a lack of 'Bengali' vegetables on the market. Through a process of trial and error, she learnt how and what vegetables could grow in London soil and sun. Shanara, one of the participants, was a regular attendee of the garden club at the Asha centre that we set up. While pointing out the different plants to me and explaining how they should grow, she told me a little about herself:

"I first moved to this country thirty years ago. My husband and I stayed in a small one-bedroomed flat in London. At the back there was a jungle. No-one used the space so we cleared it and started to grow things ourselves. We grew tomatoes, a few shaks (leafy vegetables) and broccoli. We learnt what we could grow. Then you could not buy so many seeds. Now I have a bigger flat but little space to grow. I try to grow lou (gourd) and tomatoes"

Like Shanara, most of those who gardened had a rural background and would put this to practical use; they too, like Shanara, had to adapt their skills as they figured out what and how to grow. The rural backgrounds of many of the participants were tested in London as memory and action interacted. There were of course exceptions; one woman I met on the farm hoping to start a 'growing club' was originally from Dhaka and had told me that she had learnt to garden from her

peers since moving to the UK. While not knowing how to garden prior to moving to the UK was unusual, adapting one's skills is essential. The garden as a social space where skills are shared is considered later in the section.

It was often through a nostalgic lens that participants in the study spoke about the '*sonar mathi*' (golden earth) of Bangladesh, where plants grew freely with ease. The *sangalis* constructed, that can be found all over Bangladesh, while practical, are also a visually powerful reminder of Bangladesh. The garden is a site where memory can be visualised and drawn on through practical action, fulfilling the everyday needs of food. Given that taste and freshness have value, it is not surprising that 'fresh' vegetables are grown, as explained by Shona when speaking about vegetables given to her by relatives:

"It tastes, because she just cut it from her garden and she gave it to me and I cooked it so everything is fresh, you know the green juice is coming as well when I cut it was like different, the taste is different, it is you know?"

While notions of 'freshness' coincide with healthiness as explored in the previous section, gardening and the eating of vegetables are in themselves perceived as 'healthy' activities. Gardening among Bengalis as a 'healthy' activity has been increasingly promoted; while still on a small scale, there are gardening clubs at GPs and community centres throughout London catering specifically to Bengalis (five that I know of, though there are likely to be more).

At community gardens and the allotments it was not uncommon for whole families to visit, often interacting with fellow gardeners. The produce from these spaces were valued as people will feed their families and gave friends and neighbours their vegetables as gifts. At the allotments on the city farm people would take time to admire, often with hints of envy, each other's *khodus* (pumpkins) and *lous* (gourds). On one of my first meetings with Lili, she showed me around the allotment plots on the farm pointing out who had managed to grow the biggest *lou*. While each allotment plot was assigned to an individual, relatives would frequently share a plot and work on the land together or separately (spouses, siblings and in-laws). Grown up children would occasionally accompany their parents, however it was more common for grandchildren to be brought to the plots where they could run around and play. When the allotment holders were moved were moved from their plots to boxes (discussed later in the chapter, section 6.12), I was told it was difficult to determine in several cases who the plots belonged to as many would

change hands within families. Neighbouring plot holders would interact with each other. Two women I spent time with on the farm had neighbouring plots and were always at the farm together. One was an older Sylheti woman in her seventies and the other in her forties from Kulna (Southwest Bangladesh). When I asked them how they were related, the younger woman replied that they are “*best friends*”. She explained that they met on the farm and exchanged ideas and seeds and became friends. She would help the older woman with lifting and gardening, as her children were busy with work and children of their own. As the younger woman’s own children were in school and she had not long been in the UK, she appreciated their friendship. Echoing previous studies on gardens, this stresses that the garden is a social space (Bhatti and Church, 2001, Bhatti, 2006). Not all the social relations on the allotments were positive, however. There were sometimes tensions between plot holders with reports of people stealing vegetables from neighbouring plots. As a result, most of the plots were padlocked to protect them from this eventuality.

While gardens are a social place locally, so too are they globally, as exchanges of seeds and plants between Sylhet and London are frequent. Seeds brought from Bangladesh via relatives are important and are reported to grow better than ones bought in the UK. Interestingly, upon further investigation in Sylhet, these seeds are often not from Sylhet but from other countries – India, Thailand, China and Malaysia. However, the fact that they are brought from Bangladesh is clearly important and were said to be better, with more availability than ones found here. Like food, the exchange of seeds expands the definition of ‘home’ through marking an on-going connectedness. However, unlike food, this is a far more practical act (as opposed to a primarily gift-giving act). Like food, however, gardens vary and change over time, with additional plants added into the landscape such as strawberries and ‘Chinese’ pumpkin, again reflecting a diverse British-ness incorporated into one’s food-scape and landscape.

How are these aspects defined and re-imagined through younger generations? Statistics on British gardening habits indicate that it is strongly age-related, with the majority of gardeners (over 60%) being over the age of sixty; there are no separate statistics for the Bengali population exclusively. While gardening among the research participants did tend to be associated with older people, it was by no means exclusive to them. Among the older interviewees (these were not from the farm), three were actively engaged in gardening, one had a few pots on her balcony and said if she had more time she would do more, and one did not garden at all (saying she had no space). Among the three daughters interviewed, only one (Ruby) expressed interest in

gardening. However, a few daughters of the older Bengali women at both the farm and community centres expressed interest in gardening. The conversation with Ruby during the interview was recorded and may give some clues as to how gardening changes meanings:

Ruby: *...I'd like to one day (garden) if I have a nice outdoor space.... that's something I definitely would like to do, to grow my own vegetables like potatoes, tomatoes, coriander, yeah yeah, it would be nice*

Hannah: *So why...do you enjoy or do you like the taste of home grown food or?*

Ruby: *I think it's to do with um, I think in our culture, particularly in like Islam as well there's that emphasis on like kind of pure living, like eating healthy food. You know you've got to look at where your food comes from, who made it and things like that...I don't know what they call it but it's just that sense of you know, you've prepared your own food and you've grown your own food, so I think in that sense there's something special about it*

Hannah: *Ok, so would that be a more Islamic thing or a Bengali thing? Or both maybe?*

Ruby: *Um, it might be a bit of both. I think it's just that natural living, trying to live a natural way of life...um part of it is from Islam as well, that influence, and part of it is from mum because she's always been growing her own vegetables and things... and then there's the uh, I think it has become quite big now, even in the media, they're promoting all of this stuff like make your own produce*

Hannah: *Uh huh*

Ruby: *Like even in London you've got little businesses that are kind of popping up, making their own cheese and growing...and you know what is it rearing their own chickens?*

Hannah: *Yes I saw that*

Ruby: *Yeah, and vegetables, even like the local farms, they're you know, growing veg*

Hannah: *Yes and you get local farmers markets now*

Ruby: *Yeah, yeah, all this stuff is good...and organic as well like growing your own food and trying to use organic soil*

In her narrative Ruby combines beliefs about her 'culture' and Islam as well as recognising her mother's influence while linking in with wider narratives of 'local farms' and home-grown produce. For our older participants, growing food is a practical act related to memory as well as a social act. For the few younger participants that did engage with gardening they often spoke about observing their mothers or accompanying them; however, it is also compatible with narratives of 'growing your own vegetables' and organic food production found in the media and

popular among differing groups. Again this demonstrates how food changes and adapts across space, time and generations.

When discussing food I have focused on food in the home, a semi-private space. Gardens in one's home and windowsill too are semi-private. However, community gardens and allotments are public spaces. Through the case study of the city farm where participant observation was carried out, some of the interactions and tensions that can occur when food becomes public are highlighted.



Figure 16: 'Bengali' gardens in London

6.12 The farm and public food

When I first met Lili she was busy working on an allotment of a city farm. The size of the plot was approximately fifteen feet by ten feet³⁶. Though not large she maximised the space with wooden pergolas (*jars* or *sangali*) and the plot gave her significantly more space to grow her food than the small balcony and windowsill space at her home. Faithfully walking there at least twice a week during growing season³⁷ she tended to her plants which she cooked and shared with friends and family. Around four months after meeting Lili, she along with the other allotment holders were moved from their plots and provided with six feet by four feet growing boxes in the centre of the farm. Understandably upset, she said she was not really sure why this had happened and saw little choice in her situation. She seemed unaware that there had been talk of the allotments being moved altogether. She does not like the soil, there is no room to build high *sangalis*; unlike some others who gave up their boxes she keeps hers, though with little of the enthusiasm she had for her plot. Despite her dismay and surprise at having to move, the move had been discussed and negotiated for a long time.

From the first day of visiting the city farm it was clear that it was a place fraught with local politics. The farm was created in 1979 and had been under the management and control of a single woman for thirty years until her death. Her death left a power vacuum and struggles between ‘old’ and ‘new’ managements; philosophies and ideas of which I heard many stories but never fully understood. At some point during the end of the manager’s reign, the allotments had been created primarily as a money making venture (not that much money was made). I started visiting the farm twelve years after the allotment creation, when all but four of the thirty plot holders were Bengali. They were a mixture of men and women with varying degrees of English. From all accounts they seemed primarily more interested in growing their food than in the farm as a community. The farm management and volunteers were primarily white middle-class urbanites interested in the farm, its animals and connecting to nature and the land in east London. Having emerged from the difficulties following the manager’s death, they were friends and there was a sense of belonging and camaraderie. The perceptions of the allotments on the farms, however, varied, the most succinct explanation being given by Jo, a member of the board, a sympathetic ear and keen to ‘build bridges’ between different members of the communities. *“There are two schools of thought in regards to the*

³⁶ This is a very rough estimation.

³⁷ Growing season is approximately March-September.

allotments. The first is that they are an essential part of the farm. The second is that they are useless and messy" Jo explained. These schools of thought are at opposite ends of the spectrum. Some members of the farm saw them as adding character to the farm; one such member was Lisbeth (a volunteer and friend of mine), who was fascinated by the allotments. She was very upset about discussions held regarding them, reporting that they had been described as "*backwards*", "*third world country*" and worse. I never directly heard such comments (though it would be unlikely that such comments would be made in front of me). However, I was told that the Bengali plot holders were "*cut off from the farm*" and were reluctant to "*get involved*". Jo spoke about little cultural awareness from the farm membership point of view and, there being no interaction between the two groups, she and others had tried to encourage Bengalis to join the board but with no success. During the reconstruction of the farm, I attended a planning meeting regarding one of the fields on the farm. Ideas were floated, with a picnic area, a wildlife pond and orchards being suggested. A tranquil and aesthetically pleasing space seemed to be sought after, which sounded quite out of line with the 'messy' allotments.

The decision to get rid of the allotments was as a result of a large rail project being built, and the farm being reduced by a third of its size. Initially the allotments were going to be removed altogether: the compromise had been to give plot holders a wooden box each. Lisbeth eventually resigned from her role on the board and withdrew all involvement with the farm in protest at the treatment of the plot holders, saying "*of course they could be kept, there were places they could be moved*". She firmly believed the appearance of Crossrail was the excuse people had been looking for to get rid of the allotments. Others spoke of having little choice but to move them, and felt the boxes were the most they could do. It remains unclear how aware the plot holders were of the changes, and there seemed little resistance to the move initially. However, like Lili, they were upset. At a planning meeting regarding the practicalities of the move, tensions erupted as the plot holders grew very angry at the increased price: "*we get less and have to pay so much more*" shouted one. "*We have been here all these years and this is what we get*", said another. They also accused each other of stealing vegetables and said the boxes would not be secure. The loss of their land and lack of choice in the matter, I suggest, were the main reasons for the tensions exploding. The board members at the meeting were somewhat taken aback by these explosions, later saying that the prices were not unreasonable and there had been little resistance to the movement prior to the meeting. The moving of the plot holders into boxes did force more interaction and negotiation between farm members and plot holders. The prices of the boxes were reduced and the *sangalis*, though allowed, were given a height limit. Some have left their boxes while others stay and continue

to redefine them. The ethnic mix of plot holders (now box holders) on last count was 50% Bengali.

This brief account of the movement of the plot-holders from allotments to boxes, could be interpreted as tensions between groups and communities, the group with less power and visible difference being labelled as the 'other', threatening the vision of a tranquil place where people and nature are at one. There are elements of this to be sure, but this is not merely the story of two competing groups. There were sympathies on both sides for the other (Jo for example), and there were tensions within both groups, as the accusations of stealing vegetables highlighted. Of the plot-holders there were a couple that spoke to the management and at least listened to their side of the story. Volunteers on the farm said that one-third of the farm was to be lost, and they had worked hard to compromise with the allotment holders and negotiate with Crossrail. The story of the farm depicts negative tensions and perceived threats when two visions collide (that of a place to grow food and interact with neighbours, and that of a place to connect with nature and animals in this case).³⁸ However, other gardening clubs such as the BBBC (Bromley-by-Bow GP Surgery) and Coriander club (a gardening club in east London) encourage and facilitate the gardening of Bengali and other vegetables, seeing it as an important and healthy activity. What the story of the farm also demonstrates that land and food, played out at a local level, are not private and can result in tensions, contestations and negotiations.

6.13 Conclusions

Food and plants in the British Bengali context are critical to constructing 'home here' and connecting with 'home past' and their meanings change across generations. How they are perceived, particularly in terms of health, illuminate key power differences between different groups, demonstrating how food and plants are not only symbolic and social processes but highly political. The therapeutic food-scape in this context illustrates four key points: the overlap between food and medicine; the symbolic and practical construction and connections to home; inter-generational change; and key power differences between groups.

The importance of food and plants as home-making agents is a key theme explored in this chapter.

³⁸ It should be noted that since the 'move' of the allotment holders the farm is under new management and while many of the previous members remain there are also several new ones. The farm members and management appear to be actively involved in education and working with different ethnic groups in east London, including Bengalis.

Food, and particularly 'Bengali' food, is important to connecting one to home in Bangladesh through an on-going exchange of food. 'Bengali' food is also important to home here in the UK, as differences between 'inside' and 'outside' food and changes within food at home are evident. Looking at gardens there is a powerful chain of interactions in constructions of home, tangible links to Bangladesh (for example in terms of seed exchange), links to Bangladesh in terms of memory, the practicalities of gardening as a supplier of food, and the importance of gardening as a healthy activity and the producer of 'healthy' and 'fresh' food. When looking at intergenerational change it is apparent that, as a cultural site, food and its associated meanings change and are transformed. 'Bengali' food at home, while appreciated, does not inspire the same level of appreciation as food sent from *desh*. Additionally, daughters tend to see themselves as eating a more mixed diet than their mothers, which is reflective of global influences. When looking at perceptions of health; there is little evidence of these 'alternative' values of health, though when present they take on new meanings, for example with gardens and the values of 'freshness' combined with 'organic' and 'local produce'. In older generations, too, knowledge changes and adapts but perhaps in different ways to that of their children.

Additionally I would like to highlight is power dynamics in terms of therapeutic landscapes. When we look at food in the context of health, the wider processes and meanings of food are evident. The frequent association of 'Bengali' food with being 'unhealthy' suggests key imbalances of power between different groups. I suggest it is due to these power imbalances and a lack of dialogue that differing perceptions of health are rarely acknowledged. There are many possible reasons for these power imbalances. Linguistic differences make it difficult to communicate with different groups. Class differences and illiteracy among members also lead to differences. Added to this, the knowledge of professionals and people in positions of status gives their views added weight; this knowledge is respected and often subscribed to by the research participants. With professional knowledge having added weight and being viewed as 'better' than lay knowledge it is difficult to challenge or even express one's 'lay' knowledge; it must be noted that this is not only a challenge with Bengalis, but with lay versus professional knowledge in general. However, linguistic and class differences may exacerbate difficulties in dialogue. The story of the farm, too, demonstrates how power imbalances and different visions between different groups can lead to tensions when food is public. While these points regarding power may appear to be moving away from the central themes of the thesis, they are critical to understanding therapeutic food-scapes and their place in the wider society. Furthermore, they illustrate that food is not merely a private and familial matter but embedded in wider social and political factors.

To conclude this chapter, it is clear that on-going links with Bangladesh, both metaphorical and tangible, are crucial to understanding the British-Bengali therapeutic food-scape. While transnational processes impact on local people's homes they are also embedded in social and political power networks, as food related to health demonstrates. The meanings and purposes of food and plants change over time and space, as intergenerational knowledge illustrates. When looking at intergenerational change in health, it is possible to see how power balances can be addressed and health improved with the acquisition of 'health' capital. Such capital is acquired through a reduction in structural barriers, education, a fluency in English and being able to negotiate and navigate different health systems and knowledge.

Chapter Seven: Plants and Food in Londoni Homes in Sylhet

7.1 Chapter overview

The place of *desh*³⁹ in the food-medicine-plant-scape of British Bengali homes is significant. However this significance is layered and nuanced as the role of *desh* and food-medicine varies across families and generations. For many older participants *desh* is the source of medicinal plant knowledge, both through memories and on-going connections. Food-plants are sent through informal channels as well as found in shops. Like food-medicines, 'Bengali' food found in the home remains inextricably linked to *desh*. Food sent from Bangladesh by relatives has additional symbolic, gustatory and health values. There are however, among the participants in this study, important generational differences in the relationships with and perceptions of *desh*. For younger participants, their relationship with *desh* is relatively ambivalent. The food-plants consumed are considered 'Bengali' and relate to one's home, family and history; on-going links with *desh* have less significance. Younger Bengalis in London are part of a more globalised world, which is reflected in the food they consume. Thus it is important to place the role of Bangladesh in the food-medicine-plant-scape within its local context.

This PhD project is unique in that it explores both 'host' and 'home' countries concurrently. Thus while the research has looked at the place of Sylhet in the British-Bengali space in London, what is the nature of the food-medicine-plant-scape in the homes of people in Sylhet? How do links with London impact upon medicinal plant practice, if at all? And how do they affect food consumed in the home? This chapter looks at the impact of links to the UK in the homes of 'Londonis' in Sylhet⁴⁰. It will also explore the food-medicine overlap in greater depth⁴¹ as well as looking at the generational transfer of knowledge⁴². The overall purpose of this chapter is to provide an understanding of how the 'source' (participants in Sylhet) of 'Bengali' food-plants (in the homes of participants in London) conceives their food-medicine-plant-scape and how it, too, is a complex and changing place influenced by multiple factors.

This chapter will address these issues through first providing a general overview of health-seeking

³⁹ Bangladesh and more specifically Sylhet.

⁴⁰ In response to the key question 3: "What is the impact of these global links at a local level?"

⁴¹ In response to the key question 1: "How do food and medicine overlap?"

⁴² In response to the key question 4: "What is the nature of knowledge transfer across generations?"

practices and available practitioners and health institutions in Sylhet town and the surrounding area where the fieldwork was conducted. This will be done through an ethnographic description of my fieldwork and particularly my time spent with a Sylheti family. The chapter will then look specifically at the Londoni participants in the research and their health practices and beliefs. Next, the chapter will explore the commonly used medicinal plants used in Londoni homes. It will look both at what is used as well as the reasons for this usage. The chapter will then focus specifically on food-medicines before turning its attention to 'medicinal food'. In this section, conceptualisations of what constitutes a food and what constitutes a medicine, as well as the different stages in between, will be explored. The subsequent section will examine every-day foods consumed at home and, particularly, how links to London affects the food-scape at home. The chapter will then turn its attention to how knowledge regarding food and medicine is acquired and, particularly, the inter-generational transfer of knowledge. The impact of links to London on the food-plant-medicine-scape will be explored before conclusions are made.

7.2 Pluralistic health practices in Sylhet

Dactori oshud (the doctor's medicine). *Kobiraji oshud* ('traditional' healer's medicine). Homeopathy. Ayurveda. *Ojur* (spiritual healer). *Mullah* (religious teacher). When living in a Sylheti home, I observed first-hand the varying medical practices available and often employed in parallel with each other. Through an account of my dealings in regard to illness and the consequent health-seeking behaviour with my adopted Sylheti family, I hope to provide a backdrop for the therapeutic landscape in Sylhet as well as the various considerations made when someone is unwell.

My family in Sylhet faced many illnesses; they both cared for members of the family at home as well as seeking help from a variety of professionals. During my first six-month stint of fieldwork in Bangladesh my Nani became progressively weak and fragile. She suffered from arthritis, a cataract in one eye, had difficulties with mobility, and was generally weak and old. She regularly took numerous pills (painkillers, omeprazole, sleeping pills, calcium and occasionally antibiotics). Apart from one brief admission to hospital Nani was treated at home. Her daughters-in-law, granddaughters and daughters all helped to look after her. They prepared 'soft' food for her to eat and occasionally food-medicines such as neem, helped her with her daily needs and gave her pills. Nani knew of many medicinal plants, which she delighted in telling me about. While she did consume some of these plants as part of her diet she said, generally, medicinal plants were less available now. In contrast

pharmaceutical pills were readily available in many small pharmacists. Nani and the family were also advised by various 'doctors'⁴³. There was also the added complication that only the grandchildren in the family were literate. Nani and her family did not really understand what exactly the pills she took were prescribed for; I would often be involved in explaining what the pills were and when they could be taken. In addition to biomedical practitioners, Nani had numerous stories about various *kobiraji* (traditional healers) over the years that she, her family and neighbours, had encountered. Her attitude towards *kobiraji* varied. One time she laughed as she told me about a *kobiraj* her well-off, educated neighbour had brought to help her. He danced and sang all night in their home with no effect. She also told me stories of fevers and broken bones (only straight cuts) being healed by *kobiraj*. One evening she told me about a very good *kobiraj* from India she had encountered several years ago. "He had a lot of *budhi* (knowledge). He did not charge very much. He was very good at his work and a very good person", she said. In general Nani maintained a degree of scepticism towards *kobiraji*, telling me, "I don't really trust in *kobiraj*, they work for *choto kaj* (small work) but not for the big things. Lots of times they just want money". Increasingly frail and in a lot of pain, Nani one day pulled me aside (before I left for a short break to Dhaka) to tell me that the family were going to bring in a *kobiraj* to see her. She said they had heard about a good *kobiraj* who would see her for two thousand taka (around £18, which was two-thirds of Mami's⁴⁴ monthly salary). I expressed surprise at the high cost. Nani explained that the cost covered three days of his seeing her, as well as treatment; if she saw a doctor they would need to pay for each visit (400 taka per visit) and any additional pills. Returning several days later, Nani told me that the *kobiraj* had come to the house and demanded 4000 taka so they had sent him away. Instead she saw a Hindu 'doctor'. She said unlike the *kobiraj* he was kind and could be trusted; he wanted to help her with her pain and only charged her for the medicines she needed. Several days later Nani's middle son had a heart attack and was admitted to the government hospital. Visiting him there I was impressed with the cleanliness and care he received. The costs were kept down as only medications needed to be paid for. He was later transferred to a private hospital in Dhaka where he got stents in his arteries; again the care and cleanliness was excellent. The costs, however, were high; this was fortunately covered by the school where he had worked faithfully as a guard for the past twenty years. Near the end of my first stint of fieldwork, we (I, two daughters-in-law, one son and two grandsons) took Nani to the same government hospital that Nani's middle son had been admitted to. Unfortunately we had a completely different experience. The wing of the hospital Nani was admitted to was filthy and

⁴³ It was unclear how many of these were actually trained as doctors. Several worked in pharmacies. I was told by a few of the 'pharmacists' that they attended a six-month certified course enabling them to work at the pharmacy.

⁴⁴ Mami is Nani's daughter in-law and the main wage earner of the household.

overcrowded. We had to pay bribes for anything we needed including the admission, a bedpan, seeing the doctor and having an x-ray. Nani was given a range of pills and told there were not enough beds on the ward and she would therefore have to sleep on the floor in the hallway. After being told this the family decided she could be cared for better at home and we left, taking the x-ray with us. While the experience was deeply unpleasant the dynamics in the hospital, as well as within the family, were fascinating. Nani was not spoken to during the process; instead questions were directed towards her relatives. Two of her grandsons (aged 18 and 25) and I were responsible for speaking to the doctors and finding the nurses. Nani and her two daughters-in-law, though quiet in public, remained in control as they constantly asked us what was being said and instructed us as to what to do. A more pleasant experience in a health facility was the birth of Nani's great grandchild. Nani's granddaughter was taken to an NGO clinic by her in-laws to give birth. Having laboured initially at home, they decided she may need medical assistance. Rather than risk going to an overcrowded government hospital or paying the high fees of a private clinic, which were known for mostly performing caesarean sections on labouring women, they opted for an NGO clinic. The costs were low and the clinic, though basic, was clean and the care professional.

During my second six-month stint of fieldwork, two incidents regarding health-seeking behaviour stand out. The first is Nani's youngest son (who I lived with), complained of pain due to a *pator* (stone, tumour) in his stomach. Despite his family's urges, he was reluctant to visit doctors; terrified of being operated on he instead preferred homeopathic and herbal medicines. He found a homeopathic doctor he trusted and would spend hundreds of taka on various homeopathic pills. The second incident was a more unusual one involving his wife, Mami. One evening she went to visit a neighbour and walked under a *tetul* (tamarind)⁴⁵ tree and was 'caught' by a *jinn* (spirit). She was later weak, feverish and her speech incoherent. What had happened was determined, and an *Oujor* (religious healer) from the Mosque was called. He performed *foo* (blowing on someone) and expelled the *jinn*. Mami seemed a lot better afterwards and later said she could not remember the *oujor* being in the house or what had happened since returning from the visit to her neighbour. Her daughters later told me that the *jinn* meant no harm; however, one needs to be careful particularly at sunset, especially when walking under trees as this is where *jinn*s' reside.

This brief account summarises the family's experiences of doctors, hospitals and practitioners. It illuminates several important points. One is that all decisions were communal; health and the body were not private or personal but belong to the family. The different members of the family do

⁴⁵ *Tetul* trees are believed to be particularly favoured by spirits (Thomas, 2006).

however have different roles, as well as levels of input into health-seeking. As the oldest member of the family and very much the matriarch, Nani had much say on where people should be treated; she would also help financially, giving her more power. The grandsons, less involved in the actual decision-making process of treatment, would frequently be called upon for assistance involving the logistics of getting someone to hospital and talking to doctors. Roles would vary according to where care took place. When at home it was the women (the daughters-in-law primarily) who were involved in care, though when a hospital admission occurred, often one of the grandsons would stay and help care for the *rogi* (patient). The different roles within the family varied somewhat and would often be the result of negotiation; again, this highlights how health and the body is not a personal entity. The body and health as not only individual has long been recognised in medical anthropological research. Scheper-Hughes and Lock (1986) in their influential piece, 'The Mindful Body', argue that the body can be conceptualised as an individual, social and political entity. The multiple constructions of the body beyond the individual are important to understanding how it is cared for and looked after.

In addition to the communal nature of the body and the different roles within a family, many important factors were considered in deciding treatment options. Food, home remedies and medicines kept at home were frequently the first port of call in the case of illness. If the illness was deemed to be more serious, specialist practitioners would be consulted. The severity and type of illness was important in considering the type of care required, and who should be consulted. The cause of sickness too was important. Pharmacists and doctors primarily treated physical illnesses; *kobiraj* covered a broad spectrum of systems and illnesses, much of which had no clear boundaries. Occasionally there was a clear-cut case of an illness being strictly 'spiritual', as the example of Mami's encounter with the *jinn* illustrates. When taking someone to hospital, the state of the hospital as well as financial considerations was important in deciding where they should be treated. For example government and NGO clinics were often chosen, as they are cheaper than private clinics. However if the quality of the place was poor it may be decided that the patient was better off at home (as in the case of Nani's admission to hospital). The reliability and trustworthiness of practitioners was very important in deciding whether to consult or use a practitioner; Nani would often talk about how good and trustworthy a doctor or *kobiraj* was. Those who overcharged and/or changed prices were deemed as untrustworthy, and primarily interested in finances rather than the well-being of the patient (as the *kobiraj* who came to see Nani during my first stint of fieldwork illustrated). Personal, familial and friends' experiences and recommendations are important in deciding which practitioners to call. Individual preferences and beliefs regarding medicines are

important considerations in health seeking. Nani's youngest son, for instance, was terrified of the possibility of being operated on so opted for homeopathic medicine, believing the homeopathic doctor would not choose such a drastic option. He also believed the medication was not as strong as the *doctori oshud* (doctor's medication).

The discussion in the context of personal experiences with Nani's family and their health-seeking behaviour highlights the multiple medical practices available in Sylhet. I found that ultimately the decision-making process is a product of communal, individual and familial negotiations dependent on wider structural factors (such as finances), relationships and belief systems. This is true for Londonis and non-Londonis alike.



Figure 17: Herbal medicine shop in Sylhet

7.3 The Londoni participants

Before delving into the findings of the research in Sylhet I would first like to introduce the key 'Londoni' participants, as it is primarily through their lives and insights that the food-plant-medicine-escape is explored. Anushka is in her early thirties, well educated (up to Masters level) and speaks excellent English. She is a housewife and mother of one girl. She lives with her in-laws. The large four-bed roomed house they own, two maids, guard and driver are all indicative of their wealth. Anushka's father-in-law is retired from the navy and is now involved in business. Anushka's father-in-

law has spent long periods of time in the UK and her mother-in-law has visited several times. Two of their children live and work in the UK. Their third son is a lawyer living with his parents, and the husband of Anushka. Anushka also has two siblings studying and working in the UK; though she has never been, she says she would like to visit. Family members frequently visit and stay. Anushka and her in-laws had only moved to Sylhet town, from the village of their upbringing, around five years previously. Anushka's sister in-law (Rosa) and their mutual aunt-in-law (Shahanna) were interviewed in London. Anushka and her mother-in-law were interviewed for this study. Rani and her mother were also interviewed in Sylhet. Rani is in her early twenties and is studying for a Masters degree. Her family too are well off. Rani lives in a four-bedroom flat with her mother, *dadi* (paternal grandmother), and younger brother. They have one servant. They rent the house but have a *bari* (homestead) in Moulvibazar district (a neighbouring district within Sylhet division) that they visit, and where Rani's uncles live. Rani's father had spent many years in the UK before he died a few years previously. Rani has uncles, aunts and cousins on both her mother's and father's sides in the UK. They regularly make phone calls, exchange items, and visit. Ruby (born and brought up in the UK) is Rani's cousin; their mothers are sisters. Ruby and her mother were interviewed in London. I also interviewed a cousin of Rani's and her mother (Nurjohan and her mother) in Sylhet. Similar in education, age, and status to Rani, Nurjohan's father lives in the UK and regularly visits. Roshnara and her daughter-in-law were also interviewed. Roshnara is in her late fifties, her two younger sisters migrated to the UK with their parents in the 1980s. Roshnara maintains regular contact with them and has visited London on three occasions. Shona, her youngest sister, I interviewed in London. Roshnara lives with her son, daughter in-law and grandchild. They moved from the town to the semi-rural location of Shobujpara, where I met them. They moved there due to not being able to afford the rent in the town. Though they live comfortably they rely on Roshnara's son's unsteady income as a stockbroker. Roshnara had very little education though her daughter in-law was educated up to matric (the equivalent of GCSE). Roshnara's daughter-in-law has uncles and cousins in both the UK and the USA. The final two groups of interviewees were Halima and her mother, and Rehenna and her daughter. Both live in Shobujpara. Halima and her mother were eighteen and forty respectively when I knew them. They have a *bari* in a village in Sunamganj (a division in Sylhet district) but rent a house in Shobujpara, as Halima's husband works in a shop there. They live there with Halima's four younger siblings and two-year-old daughter. Halima's mother spends her time between the house in Shobujpara and the home in the village. While they live comfortably in their house they very much identify with being from the *gram* (village); they own little land and do not employ any workers. Halima was educated until she was eighteen, her mother only in primary school. They primarily rely on income from Halima's father who has been working as a labourer in

Dubai for over twenty years. While Halima has aunts and cousins (once removed) living in the UK they do not receive money from them. They do see them when they visit from the UK and they do receive gifts from them. Rehenna too identifies with being from the *gram* and is a migrant from Brahminbaria (a district in central Bangladesh). Rehenna is in her late forties and her husband is the manager of a local factory. She has lived in Sylhet for over twenty years and raised her daughters in Sylhet; she laughs and calls them '*towne mei*' (girls from the town). She says they are well-educated (through high school) unlike her, and have benefited from her husband's position and new-found wealth. I interviewed her, and her 22-year-old daughter, who is now married and living in town. Her daughter's husband has cousins living in the UK. Rehenna has nephews, great-nephews and nieces living in the UK; she reports that when they come to Bangladesh they visit her and bring her gifts. Hashi is another participant in the study. Though I did not formally interview her, I spent several enjoyable afternoons with her and her family in Sylhet. While most of her family live in America she has one sister in London, Happy, who I also visited. Hashi is very well off, well educated (up to Masters level), speaks excellent English and practices a version of Apitherapy from home. She is in her forties, has three daughters and a husband. Her husband is involved in business and owns over one hundred acres of land, which he is developing into an organic farm. I also visited Lili's (participant in London) two sisters and their family in a very rural area in Sunamganj (a neighbouring district within Sylhet division). I spent two days with the family there. While the family there do benefit from some of the remittances sent from the UK, they clearly struggle in their daily lives and are not high class; their husbands are involved in menial labour, they do not own land or houses, and one of the sisters lacks electricity. Lili sends what she can to her elderly parents, however with no husband and struggling herself, it is difficult to send money regularly to all her relatives⁴⁶.

The participants interviewed and spent time with demonstrate that Londonis in Sylhet are by no means a homogenous group but vary in wealth, education and relationships to those in the UK.

⁴⁶ A full list of participants that were interviewed can be found in Appendix 1.



Figure 18: A Londoni house in Sylhet

7.4 Health beliefs and practices among Londonis

Though it is likely that the views and practices of the Londonis in this study are not exactly the same as my host family, they do inhabit the same physical space (Sylhet town and the surrounding area). The availability of differing and multiple medicines, practitioners and healthcare facilities are therefore the same. Like my Sylheti family, the health practices of the Londoni participants interviewed were to an extent pluralistic, varying according to a complex interaction of beliefs, perceptions, familial and social influences. During interviews the participants were asked about beliefs as well as where they would look for health care for both minor and more serious illnesses.

Turning first to their beliefs, in discussing the causes of ‘good’ and ‘bad’ health several factors were highlighted. The influence of different health belief systems (biomedicine, Ayurvedic, Islamic) was apparent. The participants viewed eating well and a balanced diet as important. This was spoken about in terms of having the right ‘nutrition’ by a couple of participants. More frequently it was spoken about in terms of eating food that is ‘good’, such as *shak shobji* (vegetables). Vegetables were viewed as generally healthy; it was explained that they contained ‘vitamins’ by a few participants. Meat, fish and eggs were highlighted by several participants as healthy food that provides the body with strength. Hashi expressed concerns about food needing to be free of chemicals, pesticides and hormones; these, she felt, were in much food (particularly fruit and vegetables) on the market.⁴⁷ A couple of the participants spoke about the need to limit sugar and oil. While views varied as to what constitutes ‘good food’, there was a general agreement on the need

⁴⁷ This view was reiterated by a few people (non-Londonis) during fieldwork. It is in contrast to the perception of the ‘fresh’ and ‘healthy’ vegetables of *desh*, common in London.

for balance and plenty of vegetables. Furthermore, the constitution of food (soft versus hard), and the medicinal properties of some food were highlighted; this will be discussed in greater detail later in the chapter (section 7.7). Anushka spoke of the importance of eating regularly; this, she felt, was important in the context of maintaining balance and regularity in one's daily life and routine. This concept of regularity was reiterated by Nurjohan and her mother. According to Nurjohan, through eating and sleeping enough (and not too much) and regularly, the body will stay well. The concept of balance is similar to findings in the UK regarding food and related to Ayurvedic concepts (chapter 6). Having a clean environment with fresh air was stressed by several participants; related to this, it was expressed that one should keep oneself clean and that not doing so may create ill health.

Along with these physical aspects of maintaining health, participants reported that worries and 'tension' too could cause one to be physically unwell; there was no clear mind-body dichotomy in this regard. Several participants (Anushka and Rani, for example) dismissed spiritual causes of poor health as superstition, and even dangerous. However spiritual causes were mentioned by others. Rehenna, Halima and Halima's mother all discussed how *jinn*, *bhut* (spirit, ghost), *nazoor* (evil eye) and other people putting *jadu* (magic) on one could cause poor health. Belief in the supernatural and the spiritual realm is complex and widespread in Bengali Islam (Karim, 1988, Thomas, 2006). *Jinn* and *nazoor* both pre-date Islamic traditions; however, they are incorporated into Islamic traditions with the prophet Mohammed speaking and giving advice on both (Thomas, 2006). Magic and witchcraft are discussed in the Koran, though its role in orthodox Islam is both believed and rejected (Thomas, 2006). *Bhut*, however is more closely associated with Hindu beliefs and traditions, though belief in them is not uncommon among Bengali Muslims (Blanchet, 1984, Thomas, 2006). The research did not delve in any depth regarding spiritual beliefs. However, if someone was affected by spirits or magic, a *kobiraj*, *oujor* or a *mullah* would be called. Halima's mother explained that if *jadu* caused your sickness then a *kobiraj* would need to be visited as the doctor's medication would not work. However boundaries were often blurred between physical, mental and spiritual causes of ill health and people would try several means of treatment concurrently. One example was when Halima's mother was ill. She visited a *kobiraj* to expel a *jinn* from her, which they thought may be causing her pain. Later they had gone to hospital, where gallstones were diagnosed, and she awaited money from her husband in the Middle East before she could be operated upon.

Turning to health-seeking behaviour among Londonis, prior to seeking help from outside of the home (be that from a doctor, pharmacist or a *kobiraj*) most participants reported first treating themselves or being treated by family members within the home. Examples of managing sickness

include taking pills (such as paracetamol), taking a homeopathic remedy or a medicinal plant or practices such as cooling down someone with a fever through applying cool water to their head. If an illness was deemed more serious, outside help would normally be sought. Outside of the home there is an array of treatment centres and practitioners available in Sylhet (as discussed earlier): biomedical, Ayurveda, Unani and homeopathic pharmacies, private doctors, individual *kobiraj*, NGO clinics, government hospitals, private hospitals and a homeopathic hospital. As with Nani's family, they were used at different times due to experiences and costs. Also like Nani's family, participants reported visiting practitioners they may trust for advice and medicines.

Perceptions, and use, of medicinal plants are discussed in greater detail later in the chapter. They were generally viewed as 'safe' but slower-acting than allopathic medicine, though this did vary according to the participant. In contrast, the *doctori oshud* (doctor's medication) was perceived as more powerful and 'strong' by several participants. Consequently, they were likely to have side effects. Anushka explained, "*I believe it (pharmaceuticals) can make a quick cure and the fact is you know if we use allopathy there are serious side effects*". The idea that pills are a quick fix was a common theme among interviewees; however, what exactly the side effects were not always known which, in itself, was an additional worry. Rehenna explained:

"You take napa (paracetamol), your headache will go, your headache is okay. But what else will it do? The medicine has lots of effects on the body. The medicine will do other work on the body at the same time."

Despite being wary of side effects, most participants reported using pills as well as medicinal plants at home, depending on the problem. A 'small' problem such as a cough or a cold may be treated with medicinal plants. However, if someone had a severe headache they would prefer a 'strong' and 'quick' cure from a pill. There were of course exceptions. Rehenna reported trying to only use medicinal plants if possible. Roshnara and her daughter-in-law, however, said they no longer used medicinal plants at all and always took allopathic medication. Biomedicine was frequently spoken about as if it was superior and advanced. It was also associated with the town and the increased availability and use of pharmaceuticals was commented upon by many. "*People nowadays are totally dependent on allopathic*", explained Rani. There were a range of opinions regarding the *kobiraj's* (healer's) medication. Some viewed it similarly to medicinal plants; slow-acting and safe. Others, such as Anushka, explained that it was 'harsh' and even dangerous. She viewed *kobiraji* as backwards and their treatments not to be trusted. Rani dismissed the *kobiraj* as based on

superstition. There are a range of types of *kobiraji*, from those who use primarily spiritual treatments to those who use mostly plants. Rani spoke about packaged herbal medicines, particularly Ayurveda, being available. Packaged herbal medicines, she said, were both safe and convenient, though not as strong as allopathic medicine. Homeopathic treatments were mentioned by several of the younger participants. Anushka was particularly interested in it; she spoke about it being 'soft' in contrast to biomedicine and the *kobiraj's* medication; its packaging also made it convenient.

The account of my dealings with my Sylheti family illustrated the communal nature of health and the body. Among Londoni participants too, I observed interconnectedness between family members regarding health practices; this interconnectedness, for some, includes transnational families. Halima's mother, when ill, was accompanied by family members when seeing a *kobiraj* and then the doctor; she later awaited money from her husband (working in Dubai) before being able to proceed with an operation. Anushka and her mother-in-law spoke about the doctor's advice in regards to the mother-in-law's diagnosis with diabetes and the father-in-law's heart condition. The resulting dietary adaptations affected all members of the family. The interconnectedness between family members, and more specifically between mothers and daughters, did at times make it difficult to decipher different practices and changes across generations. It also highlights how different groups not only impact each other, but are profoundly intertwined.

7.5 Medicinal plant-pharmaceutical interface

Before exploring medicinal plant use among Londonis, it is important to examine (albeit briefly) how this study may fall into wider debates regarding the medicinal plants-pharmaceutical interface. This research concurs with other research, that biomedicine and biomedical practices do not generally displace other medical systems (Etkin et al., 1990, Macfarlane and Alpers, 2009, Giovannini et al., 2011), but different beliefs and types of medicines co-exist. Giovanni et al., (2011), in their study looking at pharmaceutical and medicinal plant use in a rural indigenous community in Mexico, found a positive correlation between individual medicinal plant use and pharmaceutical use, and the two could be interpreted as complementary. Rather than pharmaceuticals and medicinal plants being viewed as competitors, both are seen as viable options and essentially part of the same health-care-landscape; therefore 'knowledgeable' lay people are likely to know about both types of treatment. This is in contrast to other ethnobotanists, who argue that the increasing availability of pharmaceuticals

contributes to a decline in medicinal plant use (Caniago and Siebert, 1998, Vandebroek et al., 2004). It should however be stressed that local context is critical to understanding the medicinal plant-pharmaceutical interface.

Returning to this research, among Londonis in Sylhet it was apparent that pharmaceuticals and medicinal plants are perceived differently; however, among most of the participants both pharmaceuticals and medicinal plants are used. There is also some evidence of a decline in medicinal plant use as a result of biomedicines; for example, Roshnara and her daughter-in-law claim there is no longer any need to use them. However, medicinal plants do continue to be used by other individuals; their safety and long-term effects are valued. The nature of medicinal plant use appears to be changing somewhat. The incorporation of medicinal food into diet remains important (see section 7.7), they are increasingly packaged and the scientific validation of medicinal plants is valued. For most participants, while the nature of medicinal plant use may be changing it is not 'disappearing' or being displaced by bio-medicine; rather, both are used depending on need and availability, as this section of the chapter illustrates.

7.6 Medicinal plant use at home

7.6.1 Purposes of medicinal plant use

Medicinal plants were reported to be a common part of the therapy-scape in the homes of the participants, with all but two of the participants interviewed (Roshnara and her daughter in-law) reporting regular use of medicinal plants. Table 6 highlights some of the commonly used medicinal plants among the participants. A full list of medicinal plants used in Sylhet can be found in Appendix 7⁴⁸. Table 7 divides the commonly used food-plants into three categories. They are: 'plants used for upper respiratory ailments', 'food-medicines' and 'other'. Through looking at each group of plants it is possible to unpick the various factors involved in medicinal plant practice among Londonis.

The most commonly reported reason for participants using medicinal plants was to treat minor upper respiratory ailments (coughs, colds etc.). They were viewed as easily treatable ailments. Similar to the UK, many of the plants used to treat coughs and colds are commonly available kitchen spices (*long/Syzygium aromaticum*, *adda/Zingiber officinale*, *gul morich/Piper nigrum*, *elichi/Elattaria*

⁴⁸ A list of the medicinal plants collected and deposited in the SOP UCL herbarium can be found in Appendix 5.

cardamom). While some can be drunk as teas, either alone or combined (*tej pata/Cinnamomum tamala, adda/Zingiber officinale, long/Syzygium aromaticum*), more frequently only the juice was consumed, either alone or in combination (*adda/Zingiber officinale, tulsi/Ocimum tenuiflorum, bashuk/Justicia adhatoda*). *Tulsi (Ocimum tenuiflorum)* and *bashuk (Justicia adhatoda)* are the two most frequently reported medicinal plants taken for coughs and colds. Unlike the other plants in this category they are not consumed as teas but are strictly medicinal. For the other plants used for minor upper respiratory ailments, the boundaries between food and medicine are more blurred, being used as teas as well as specific treatments. The reasons certain plants are taken to alleviate minor respiratory ailments are straightforward; they are available, effective and treatable at home.

Turning to the 'other' section in table 7, there are several plants used for differing reasons. Table 8 breaks down the reasons the plants are used (cuts, diabetes, bowel problems and dehydration, heart problems, blood pressure and dizziness, menstrual regulation and vaginal discharge, postpartum recovery, skin rashes, stomach problems)⁴⁹. Similar to plants used for minor upper respiratory ailments, 'other' plants can be used for conditions that are deemed minor and treatable at home (such as cuts, stomach upsets, diarrhoea, dehydration). "For this primary treatment we treat at home", explained Rani. Other conditions that were viewed as more serious but could be treated at home (initially at least) included those where there were treatments that worked, and the plants were readily available. For example, neem (*Azadirachta indica*) is commonly used to treat rashes, measles and chicken pox. The availability of plants is of importance as to whether or not they are used. For example, many plants found in the kitchen are used (*hollud/Curcuma longa, kalo jeera/Nigella sativa, roshun/Allium sativum* etc.). While the use of plants for primary and 'easily treatable' conditions was widespread in home, the use of plants for more 'serious' and long term conditions was not as common. There were examples of people taking regular doses of *arjun (Terminalia arjuna)* and/or *roshun (Allium sativum)* for the heart and high blood pressure. They were often taken for long-term conditions and sometimes in combination with biomedicine. Finally, there were reported to be a couple of plants that were only used by women: *rojat (Ocimum gratissimum)* for postpartum recovery, and *ulot (Abroma augusta)* for menstrual regulation and vaginal discharge. *Ulot*, was known by a couple of participants, who said they would advise its use if necessary. If it did not work then outside help may be sought. *Rojat* in contrast was a well-known plant that is grown in people's gardens⁵⁰. Mothers and grandmothers would feed it to their daughters post-delivery. It was

⁴⁹ It should be noted that these are not the only reasons for medicinal plant use in Sylhet, however they were the most frequently sighted.

⁵⁰ This plant used for post-partum recovery appears specific to Sylhet. It took me time to identify it as it was not in any reference books and appeared widely unknown outside of Sylhet.

reported that there were other plants that were given pre- and post-delivery. However, they were not named by the participants in the study. This was partly due to some of the participants (such as Halima’s mother and Rehenna) only knowing the plants by sight; they also said it was other women or *dyes* (village midwives) who would advise them on what plants to take. Another reason why the other plants were not known is most likely due to the participants reporting that they (or their daughters and daughters-in-law) now give birth in clinics or hospitals and therefore are unlikely to use medicinal plants during the process. Both *rojat* and *ulot* illustrate how plants can be gendered and issues specific to women are sometimes treated in the home; however, this does appear to be changing in the case of childbirth, among Londoni participants at least.

The final column in table 7 is ‘plants that can be consumed as food and medicine’. These plants tend to be easily available and are consumed for a range of reasons. Food-medicines are discussed in greater detail later in the chapter (section 7.7). However, first some of the more general reasons for using medicinal plants will be discussed in greater depth.

Table 7: Examples of food plants used commonly among Londonis

Upper respiratory ailments	‘Other’	Consumed as food (and medicine)
<i>Cinnamomum tamala</i> (Buch-Ham) T.Nees & Ebern., <i>tej pata</i> <i>Elettaria cardamomum</i> (L.) Maton., <i>Elachi</i> <i>Justicia adhatoda</i> L., <i>bashuk</i> <i>Ocimum tenuiflorum</i> L., <i>tulsi</i> <i>Piper nigrum</i> L., <i>gul morich</i> <i>Syzygium abbreviatum</i> Merr., <i>long</i> <i>Zingiber officinale</i> Roscoe, <i>adda</i>	<i>Averrhoa carambola</i> L., <i>kamranga</i> <i>Abroma augusta</i> L.f., <i>ulot</i> <i>Curcuma longa</i> L., <i>hollud</i> <i>Tamarindus indica</i> L., <i>tetul</i> <i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn., <i>arjun</i> <i>Hibiscus rosa-sinensis</i> L., <i>joba</i> <i>Lawsonia inermis</i> L., <i>henna/mendhi</i>	<i>Aegle marmelos</i> (L.) Correa, <i>bel</i> <i>Allium sativum</i> L., <i>roshun</i> <i>Aloe vera</i> (L.) Burm.f., <i>gritikumari</i> <i>Azadirachta indica</i> A. Juss, <i>neem</i> <i>Centella asiatica</i> (L.) Urb., <i>tunimankuni</i> <i>Colocasia esculenta</i> (L.) Schott, <i>kochu</i> <i>Nigella sativa</i> L., <i>kalo jeera</i> <i>Phyllanthus emblica</i> L., <i>amloki</i> <i>Trigonella foenum-graecum</i> L., <i>methi</i> <i>Oryza sativa</i> L., <i>bhat</i> <i>Ocimum gratissimum</i> L., <i>rojat</i>

Table 8: Common conditions treated by medicinal plants

Disorder/illness	Plants commonly used
Cuts/bleeding	<i>Curcuma longa/hollud, Hibiscus rosa-sinensis/ joba, Lawsonia inermis/henna/mendhi</i>
Diabetes	<i>Aloe vera/gritikumari, Azadirachta indica/neem, Hibiscus rosa-sinensis/ joba, Nigella sativa/kalo jeera, Tamarindus indica/tetul, Trigonella foenum-graecum/ methi,</i>
Diarrhoea, dehydration, dysentery	<i>Aegle marmelos/bel, Oryza sativa/bhat,jau, Nigella sativa/kalo jeera,</i>
General health	<i>Allium sativum /roshun, Aloe vera/gritikumari, Azadirachta indica/neem, Centella asiatica/tunimankuni, Colocasia esculenta/kochu, Nigella sativa/kalo jeera, Phyllanthus emblica/amloki, Ocimum gratissum/rojat pata</i>
Heart problems, blood pressure/dizziness, blood circulation	<i>Allium sativum /roshun, Averrhoa carambola/kamranga, Colocasia esculenta/kochu, Terminalia arjuna/arjun,</i>
Menstrual problems, vaginal discharge	<i>Abroma augusta/ulot</i>
Pain (<i>bedne</i>), arthritis	<i>Azadirachta indica/neem, Nigella sativa/kalo jeera</i>
Post-partum recovery	<i>Ocimum gratissum/rojat pata</i>
Skin rashes, chicken pox, measles	<i>Aloe vera/gritikumari, Azadirachta indica/neem, Hibiscus rosa-sinensis/joba</i>
Stomach upsets/problems, stomach pain, digestion	<i>Aegle marmelos/bel, Centella asiatica/tunimankuni, Nigella sativa/kalo jeera, Phyllanthus emblica/amloki</i>

7.6.2 Further reasons for medicinal plant use

As explained above, the reasons for medicinal plant use are largely to do with practicalities; because they ‘work’ and are available. The practical nature of medicinal plant use is consistent with research in the UK (chapters 3 and 5) as well as other ethnobotanical literature (Stepp and Moerman, 2001). Medicinal plants are often used for primary treatment as well as in food, and for certain women’s, and some long term conditions. The reported reasons for medicinal plant use did tend to be for physical conditions. This is likely to be because (minor) physical conditions are more easily treated with no expertise required. It should however be noted that sometimes plants were used in conjunction with prayers for mental and/or spiritual difficulties (for example, in cases of dehydration and fever); in such cases, however, it is likely that specialists would be called upon. Furthermore, because a problem manifested itself physically did not necessarily mean that the cause was always perceived to be physical; hence plants and spiritual treatments may be used concurrently. As discussed earlier in the chapter, perceptions and beliefs regarding plants and medicines are important to deciding whether and how they should be used.

Medicinal plant use is often perceived as safer than biomedical treatment. Medicinal plants were sometimes described as 'soft' (in contrast to 'strong' biomedicines). For this reason they were sometimes the preferred treatment, for children particularly, for example when treating 'childhood' diseases such as chicken pox. However, medicinal plants were often perceived as taking time. The quote by Hashi succinctly summarises the perception of biomedicine being a 'quick fix' versus medicinal plants taking a long time to act:

"Nowadays everyone just wants a quick fix...for example if you have a stomach ache, you can take two pills and it will go quickly. You could also take the time to crush tunimankuni leaves, make a bhorta and after eating it wait several hours for it to work"

People no longer having the time, due to the busyness of modern life, to find and prepare medicinal plants was reiterated by several participants; interestingly, this was reflective of much of the research in the UK. This was in contrast to how participant conceptualised the past and rural areas where medicinal plants continue to be used (again this was reflected in the views of UK-based participants).

However, as Rani explained, plants do not always have to be used as raw materials, but are now available as extracts packaged. Despite saying people are dependent on allopathic medicine, she later acknowledged that this is changing as plants adapt and are redefined for the purposes of modern life, and people 'rediscover' their importance:

"We can buy products, basically we take extracts...now everything is changing, now people understand that herbal products are very reliable, more than chemical products. They, they that know they have some interest. They are going back like it was before"

Rani's explanation not only highlights how products change and adapt, but also illustrates how medicinal plants come in many forms. The differing forms have ascribed meanings. They may be raw plants bought or plucked, that are then cooked or made into various preparations; they are often viewed as 'safe' or 'soft'. The *kobiraj's* (healer's) versions of the plants are viewed as more potent, effective, expert, backwards or dangerous depending on whom you speak to. The packaged, pharmaceutical versions of the plants may be construed as modern and convenient, much like biomedicine, though safe and perhaps not as effective. Within each form however there are differences of course. The individual beliefs and reasons for use are by no means in a vacuum but influenced by families and wider transnational networks. Before examining some of these

influences, let us turn to the most common form of taking these plants, namely as food-medicines.

7.7 Food-medicines and medicinal food

7.7.1 Food-medicines

Many of the plants cited by participants can be consumed as food as well as medicine. They are consumed for multiple purposes and tend to be generally available in the market and occasionally grown in people's gardens. The boundary between food and medicine is indeed blurred. Whether an item is consumed as a food or a medicine depends on both its preparation and purpose. The overlap and categorisation of plants as food and medicine in a range of contexts has been highlighted in ethnopharmacological research (Etkin and Ross, 1982, Sandhu and Heinrich, 2005, Pieroni and Price, 2006, Pieroni, 2007).

Table 9 outlines some of the most commonly consumed food-medicines among participants in this research. The table also illustrates the range of ways various food-plants are consumed. A few of the plants were reported as normally being eaten as food: *amloki* (*Phyllanthus emblica*) for example is eaten as a fruit, and *tunimankuni* (*centella asiatica*) is usually eaten with rice. Both, however, have very specific medicinal purposes; *amloki* is eaten to increase one's appetite as well as for stomach upsets and coughs, *tunimankuni* works on stomach pain and digestion difficulties. While both these plants are normally consumed as food but for medicinal purposes, for most of the other plants the transition between food and medicine is more complex as it is ingested and applied in many different forms. *Kochu* (*Colocasia esculenta*) for example can be soaked in water and applied topically to stop itching. Anushka, however, described how she cooks *kochu* in food for her husband's elderly parents as it has plenty of vitamins; it tastes particularly good with chicken, she says. She says the *krishna kochu* (the red form of *Colocasia esculenta*) promotes blood circulation and so she has cooked it for her elderly father-in-law, particularly since his heart attack. She also encourages him to consume *roshun* (*Allium sativum*) in food as it is good for his heart, she says, but it is better when two cloves are taken daily on an empty stomach in the morning. These examples demonstrate how a plant can be taken as a food with therapeutic benefits, and also as a medicine. The two diagrams below (figures 19 and 20) illustrate two specific examples of a plant's transition from food to medicine (and vice versa). The first example is neem (*Azadirachta indica*). Neem is used for multiple medicinal purposes and comes in many forms; it is bathed in for skin conditions, used as a cosmetic and

packaged as pills. As a food it is made into *bhortas* (crushed with mustard oil) and *bajis* (fried with onions) and eaten with rice. When eaten specifically for pain or diabetes but in the form of a *bhorta*, the boundaries between food and medicine begin to blur. The second example, *methi* (*Trigonella foenum-graecum*), when eaten as food is used as a spice (the seeds particularly) or as an extra ingredient (the leaves as a *shak* [leafy vegetable]). The general health benefits of *methi* in food are often acknowledged. As a strict medicine it is normally ingested by itself regularly (for example to mitigate diabetes) or as needed (for example for a stomach ache). However, *methi* can also be cooked in *kitchuri* (rice cooked with lentils) and fed to people who are unwell. Additionally, as a medicinal food *methi* is sometimes added to *jau* (rice boiled to create a semi-liquid consistency), as explained by Nurjohan's mother "methi works on stomach ache. If methi is cooked only with rice and it's softened up like a mash called jau. Do you know jau? It helps to reduce stomachache." For this form of food-medicine, the consistency (soft) is as important as the content. Moving onto food and what is cooked for the generally unwell, consistency and taste are critical.

Table 9: Examples of commonly consumed food-plants

Name of plant	Purpose	Other information
<i>Aegle marmelos</i> (L.) Correa, <i>bel</i>	Used for dysentery, it 'cools' the stomach	The ripe fruit can be made into a juice. The young fruit is sundried, sliced, soaked overnight, and the water is drunk.
<i>Allium sativum</i> L., <i>roshun</i>	Heart, general health, coughs	It is eaten alone or in food. It can also be crushed with ginger for coughs.
<i>Aloe vera</i> (L.) Burm.f., <i>gritikumari</i>	Diabetes, general health, occasionally coughs and colds	The juice from the leaves is taken as a drink. The jelly, taken with concentrated milk and palm sugar, is made into a <i>halwa</i> . It can also be applied topically for skin conditions/general health of the skin.
<i>Azadirachta indica</i> A. Juss, neem	Diabetes, general health, relieves <i>bedne</i> (pain)	The leaves are eaten as a <i>bhorta</i> with rice. It can be made into tablets (<i>bhuri</i>). It is also used for skin conditions (rashes, allergies, scabies etc) when bathed in.
<i>Centella asiatica</i> (L.) Urb., <i>tankuni/tunimankuni/khudimankuni</i>	Stomach problems – digestion, pain, upsets	The leaves are commonly eaten in food as a <i>bhorta</i> or <i>baji</i> with rice.
<i>Colocasia esculenta</i> (L.) Schott, <i>kochu/krishna kochu</i>	Blood circulation (particularly <i>Krishna kochu</i>), general health, has many vitamins.	The leaves, stems and rhizome are all eaten in curries. The leaves – after being soaked in water, the water is then applied topically to stop itching. A distinction is made between <i>shada kochu</i> with dark red leaves and stems (<i>Krishna kochu</i>) and <i>kochu</i> with green leaves; <i>krishna kochu</i> is viewed as 'stronger' by some.
<i>Nigella sativa</i> L., <i>kalo</i>	Diabetes, general health,	Is eaten in curries in food; the seeds can be

<i>jeera</i>	stomach acid, 'weak' stomach, bloated stomach, lack of appetite, aches and pains	ground and consumed. The oil can be applied topically. "It can be used to cure anything except death" is a quote from the Koran that was often repeated.
<i>Phyllanthus emblica</i> L., <i>amloki</i>	General health, increases appetite, stomach upsets, coughs	The fruit is eaten.
<i>Trigonella foenum-graecum</i> L., <i>methi</i>	Diabetes, stomach complaints	The leaves are eaten in food, can be added to <i>jau</i> . The seeds are eaten as a spice, they can also be taken alone.
<i>Oryza sativa</i> L., <i>bhat</i>	Dehydration, general weakness	Rice is boiled and made into a semi-liquid preparation to treat dehydration.
<i>Ocimum gratissimum</i> L., <i>Rojat pata</i>	Stomach health, fed after childbirth to help heal the mother	Eaten as a <i>shak</i> in food. Sometimes mixed with other leaves when eaten after childbirth.



Figure 19: Neem (*Azadirachta indica*) as food and medicine



Figure 20: Methi (*Trigonella foenum-graecum*) as food and medicine

7.7.2 Medicinal food: consistency and taste

In the UK participants spoke about ‘soft’ and ‘strong’ food (chapter 6). The participants in Sylhet discussed the different types of food in greater depth. For the generally unwell, the very young and the very old, ‘soft’ foods were recommended. This food is believed to be easily digested in the body and therefore suitable for those who are weak in constitution. As Anushka explained, “*When you are ill and everything is not working very well so you take the light food so that you will digest very quickly*”. Table 10 illustrates which foods may be considered ‘soft’. More importantly it describes the characteristics of ‘soft’ foods; soft in texture, reduced spice and ‘thin’. They are in contrast to ‘strong’ foods which are suitable for well and strong people, and are rich in spice and oil. Food, however, is a spectrum along which the majority of ‘everyday’ food falls somewhere in the middle, with ‘soft’ and ‘hard’ on two opposing poles. ‘Normal’, everyday foods can be transformed into either ‘soft’ or ‘hard’ by adding or taking away spices, oil, various ingredients and liquid, as well as cooking for different lengths of time; rice as *kitchuri* or *biryani* is a clear example of this. When looking at ‘hard’ and ‘soft’ foods we again see the food and medicine boundaries blurring, as some ‘soft’ food can be characterised as medicine. For example, *jau* is classified as both a ‘soft’ food and medicinal; *kitchuri* too when cooked very soft with *methi* is often classified as medicinal. This food I label as ‘medicinal’ food. Table 11 gives examples of different types of food on the food-medicine spectrum. Figure 21 illustrates the spectrum and blurred boundaries between types of medicines and foods.

Consistency is important to food and medicinal food; taste matters too. Participants reported that ‘spicy’ or ‘jaal’ were to be avoided generally when people are unwell unless specifically required (*gul morich* for example is occasionally used for colds). Bitter foods appear to have some additional medicinal properties, particularly for diabetes. It was explained by Rehenna during fieldwork, regarding neem and diabetes, “*I take neem because it is bitter, the bitterness is good if you have diabetes, it works against the diabetes*”. This is consistent with other participants’ reports, and numerous plants are known for their ‘bitter’ tastes which counteract the sweetness of diabetes. The concept of bitterness has been reported in other research among people of South Asian origin (Pieroni and Torry 2007, Pieroni et al 2007). In this research it was clear that the perception was widespread and influenced not only the medicinal plants consumed, but the food that is eaten and prepared. As diabetes becomes an increasing concern in Bangladesh the consumption of ‘bitter’ plants, both as food and medicine, is a conceivable means of prevention and control. Shephard’s concept of sensory ecology theorised that taste is a bio-cultural phenomenon rooted in both physiology and culture (Shephard 2004, Pieroni and Torry 2007). Indeed taste, and particularly bitter taste, is important in the Sylheti medicinal food-plant context, particularly when applied to diabetes.

Other properties that were mentioned included plants being *gorom* (hot), that would work for cold illnesses such as pneumonia; plants with cooling properties were mentioned, which were used to cool down fevers and colds (see Table 12). The humoral dimension to medicine is widespread in Ayurvedic, Unani and ‘folk’ medicine. It is therefore surprising that these concepts were not discussed more during fieldwork. This is possibly because none of the participants interviewed were ‘experts’ but rather used plants for practical purposes and, essentially, for what ‘worked’; the how and why was not always important. A final point that should also be noted is that it was stressed by many participants that what is fed to the *rogue* (patient) is adapted to the individual, and depends on how much s/he can handle, their constitution as well as personal preferences. The highly tailored, holistic and individual treatment of a patient is very much in line with Ayurvedic theory. Indeed many factors must be considered in such treatment, be it through food or medicine.

Table 10: ‘Soft’ and ‘strong’ foods

Soft/digestible/thin foods	<i>Kitchuri, rothi</i> /bread (soft), fruit (banana particularly), <i>suji</i> (semolina cooked with milk), <i>shemi</i> (very thin noodle dish cooked with milk and sugar), juices, Horlicks drink
Qualities of soft food	Literally ‘soft’, reduced spice, sometimes ‘thin’
Strong foods	<i>Biryani, pilau</i> rice, rich curries, beef, goat meat
Qualities of strong food	Contain spice, oils, may be tougher to eat (for example beef)

guest. They would reply that it was because they loved me that they would feed me. These interactions highlight how food and feeding is critical to hospitality as well as a means of showing affection and love. The privileged place of food in Bengal is consistent with studies of food in the area and among their diaspora (Ray, 2004, Janeja, 2010).

During the interviews research participants were asked what they had eaten in the past day and what they normally ate. Three meals a day was standard. For breakfast, several participants reported having *roti* (flat bread) with different types of vegetables, normally in a *baji* and/or egg; *kitchuri* was also reported as an occasional breakfast dish, as were cereals. Rice is the staple, and central to the diet. It was reported to be eaten at least twice a day by all the participants interviewed (apart from one). Rice is accompanied with various vegetables, fish and meats. Between meals, tea and various snacks are consumed. A range of snacks are eaten and served, including *shemai* (thin noodles in a thick milky sauce), *suji* (sweet semolina), various *pittas* (Bengali flatcakes), biscuits, chocolates, *mishtis*, spicy pasta, pasta with tomato sauce, noodles, *piyajis* (fried onions and lentil cakes) and samosas. While the staple foods may appear fairly standard, there was indeed much variety. Similar to the UK (chapter 6) there are many forms of rice (*pilau*, *biryani*, *kitchuri*). While it is normally (though not always) plain white rice that is eaten in the house, a variety of items may accompany it. Various vegetables are consumed depending on the season and individual preferences; different *shaks* (leafy vegetables), various gourds, pumpkins, different beans, to name a few. Vegetables are cooked as *bajis* (fried with onions and spices) or *bhortas* (crushed, chillies and mustard oil may be added). They are also found in different curries with other vegetables and sometimes fish. Numerous fish are eaten in fried form, in curries and sometimes as *bhortas* depending on the fish and individual preferences. There are also numerous types of curry sauce; the 'standard' *jol* (sauce) varies in levels of *jaal* (spiciness); various spices are blended, cooked according to the main item or preferences. Other types of curries include *tenga* (a tomato based sauce and considered Sylheti), *jaal* (literally meaning spicy) and *korma* (a mild yoghurt-based curry, eaten more on special occasions). There are also numerous types of *daal* (lentils), as well as ways to cook it. Most participants reported eating together with their families, thus it is unsurprising that there was not a huge variety between mothers and daughters in terms of what was eaten in the home. However, there were some differences (discussed later in the section).

It should be noted that the foods eaten in the houses of the participants are unlikely to be reflective of Sylheti households in general. The participants interviewed all had links to London and, partly due

to this at least, are of higher socio-economic class⁵¹. This is reflected in the consumption of meat particularly in the diet, as well as 'outside foods'. An increase in wealth and a move from rural to urban (or semi-urban) locations by many of the participants has impacted on their diet. Fewer vegetables grown in their *baris* (homes) were reportedly consumed, as well as an increase in oil, meat and sweets in the diet. This too is similar to some of the findings in the UK, with similar increases in oil, meat and sweets reported on migration to the UK. Also reflective of the UK were reports in adaptations to diet in the context of health.

Several of the older participants were worried about their health, particularly post-diagnosis of a condition, and adapted their diets accordingly. Examples include Rani's mother who, worried about diabetes, only eats rice once a day; in the evening, when the other members of the families are eating rice she will have *roti* (flatbread) with her curry. She also drinks black tea with no sugar on the doctor's advice. Rehenna too reduced her rice intake, eating smaller portions following a diagnosis of diabetes, telling me that rice is like *bish* (poison) for diabetes. Anushka's parents-in-law advised by the doctor to be careful with their diet, particularly following her father-in-law's heart attack a couple of years earlier. Anushka, when cooking for her parents-in-law, reported that she now reduces the oil and red meat content in their food as well as adding food-medicines to their diet (neem and *kochu*). As they eat together she too consumes much of this food. Hashi took great pride in feeding me 'organic' vegetables, telling me this is how she likes to have her food as it is free of pesticides and other chemicals. As in the UK, 'fresh' food is valued, though not as great an emphasis is placed on it. This is likely to be because the vegetables consumed are nearer to the source and have not travelled thousands of miles to reach the plate. Similar to the UK, health messages have penetrated people's homes and affected the way they eat; these are less often from public health campaigns, and more frequently due the doctor's advice, as well as advice from familial and wider networks. Younger participants seemed aware of some of the health implications of food, and while joining in some of the efforts of their parents to make their diet healthier (perhaps cooking with less oil in Anushka's case) they generally seemed less concerned than their parents. For example, Rani laughed at her mother for no longer eating rice in the evening and giving up sugar and milk in her tea. Some of the changes to diet made, particularly by older participants, in the context of health may appear to contradict the argument that, as people increase in wealth and move from rural to urban areas, there is an increase in 'unhealthy' foods (oil and sweets). What it does show, however, is that through the course of people's lives, differing events that occur (such as the diagnosis of an illness, or migration) will all impact on what is consumed.

⁵¹ There were of course differences between the participants, both in levels of wealth and their closeness to families in London.

The food we have concentrated on thus far is food within the home. What of 'outside' food? Many of the women reported rarely eating outside of the home, apart from at weddings and when visiting family and friends. However, this was not true for all the participants. Anushka occasionally ate out with her husband and daughter. Rani, when at university, would eat out and pointed to this as a key difference between her own and her mother's eating habits:

"There has been some change. I now eat pasta, and sometimes sandwiches. Things that are outside, when I go to university and I often can't eat at home, so when I go out sometimes I eat fast food. Sometimes I eat in restaurants, I eat food like this, I eat Chinese."

This quote is somewhat reflective of participants in the UK who spoke about the global nature of food in London. In Sylhet fewer participants than the UK reported eating in public spaces such as restaurants. This is probably due to the gendered nature of the research. However, increasingly in Sylhet there are Indian and Chinese restaurants, takeaways, burger joints and fast food places. The consumption of this 'outside food' does appear to be changing, which in time is likely to be increasingly reflected in the home. When looking at transnational food now in the home, the participants interviewed revealed much foodstuff sent from the UK to Bangladesh. Items sent from the UK included cereals, sweets, chocolates, crisps, biscuits, cereals, juices, jams and various jarred items such as mayonnaise and even sardines (see chapter 5). While many of these foods are seen as treats, they are often requested and items such as jams and cereals are increasingly found in the Londoni food-scape at home. Much of this food too can now be found in supermarkets and shops in Sylhet as items are imported from India, the Middle East and further afield. When visiting participants in their homes I was frequently fed biscuits, different sauces and pasta. As explored in chapter 5 (supply chains), foreign food from the UK is a type of social capital; so too is foreign food sold and found in shops. Among the Londoni participants interviewed one's class and wealth was reflected in the foreign foods that could be found in their houses. Halima's family are not regarded as high class, and their Londoni links are more distant than most of the participants. I was never fed foreign food in her house; in contrast, Rani would cook different pastas with various sauces for me as well as serving me a range of foreign sweets. Anushka, while giving me 'Bengali' snacks, would also offer me foreign biscuits. Both Rani and Anushka are well-educated, speak English and, in contrast to Halima, stand out as people with transnational connections. The food they serve and experiment with reinforces their class and transnational status. Thus the food-scape in Londoni households is

ever-changing, not least influenced by on-going Londoni transactions.

7.9 Plants, food and knowledge transmission

Knowledge regarding food and medicine was reported to be acquired through word of mouth, observation, and practical assistance from the person one was learning from. Key sites of knowledge were family members, friends and neighbours and, occasionally, practitioners. When and what medicinal plants and food were consumed changed and varied throughout one's life course.

Family was identified as an important site of learning by participants. Knowledge was often attributed to elder family members; mothers and fathers as well as grandparents and sometimes extended family members. Interestingly, medicinal plant knowledge does not appear to be specifically female. Participants would talk about learning from their fathers and grandfathers as well as from their mothers and grandmothers. It is possible that there are differences between male and female knowledge, however as the study did not look at male medicinal plant knowledge, I cannot say how they may differ⁵². When looking specifically at mother-daughter knowledge; unsurprisingly there was much correlation between mother and daughter (or mother-in-law and daughter-in law) knowledge. Participants in the same family often quoted the same plants that they used and/or knew about. Despite knowledge frequently being attributed to one's parents' generation, there was only one example of a pair where the mother used more medicinal plants than her daughter among the interviewees (Rehenna and her daughter). It appears that mothers and daughters often have similar levels of knowledge and interest in medicinal plants. Additionally, they learn from each other rather than it being a straightforward vertical transfer of knowledge. Finally they are both influenced by intertwining life events. By looking at the mother-daughter (and mother-in-law/daughter-in-law) pairs, it is possible to unpick some of the influences on medicinal plant knowledge.

Anushka and her mother-in-law described using and knowing similar and different food-medicines. Anushka said she uses various food-medicines that she had learnt about from her mother in-law,

⁵² On male and female differences regarding medicinal plant knowledge, I can speculate. I would be surprised if men were knowledgeable about medicinal plants used specifically for females (*ulot* and *rojat* for example). As women are generally in charge of the cooking, they may know more about food-medicines. However, men are generally responsible for food shopping and involved in deciding what is cooked, so this may not be true.

such as *rojat*, *kochu* and neem. However, when conducting an interview with her mother-in-law, the mother-in-law informed me that she knows no medicinal plants. She later told me a few she knows plants used for coughs and colds (*adda*, *roshun*, *tej pata*, *tulsi*), and an additional few that she incorporates in her food specifically for diabetes (*kalo jeera* and *methi*). Anushka reported also knowing these plants. Roshnara also denied knowing any medicinal plants during her interview, though in subsequent visits she named a few that she no longer uses or that her parents used; they included commonly known plants such as neem, *tulsi*, *bashuk*, *tankuni*, *arjun* and *mendhi*. Her daughter-in-law reported not knowing any medicinal plants either, saying her parents had not used them and neither did Roshnara whom she now lived with. Rani and her mother reported using various food-medicines at different times, as did their relatives (Nurjohan and her mother). Rani, Nurjohan and their mothers however reported knowing more medicinal plants than they use, mostly incorporating medicinal food plants into their diet as required (*tankuni*, neem, *methi*, *rojat* and *kalo jeera* for example). Rani said that she occasionally used packaged products that were extracts, particularly the numerous neem products available both as pills and as cosmetic products. Rani, Nurjohan and their mothers reported that medicinal plants are used more in the village; both families have village *baris* (homes) and had spent some of their lives there before moving into town. Halima and her mother stated numerous food-medicines that they used, though they could not always remember the names. Rehenna too knew of many, she said she trusted them unlike her daughters, who are '*towne me'*' (town girls). During the interview with one of her daughters, she confirmed this. She said maybe she would use more medicinal plants when she is older, however for now she was happy to stick to biomedicine, apart from occasionally making teas from *adda*, *ginger*, *tulsi*, *long*, and *elachi* to treat coughs and colds. The accounts of similarities and differences between mother and daughter food-plant knowledge, tell us a lot about the transmission of knowledge and practice between individuals, generations and families.

Both Anushka's mother and Roshnara denied knowing any medicinal plants, initially at least. Roshnara spoke about medicinal plants she knew, however she no longer felt they were relevant to her life as she uses biomedicine exclusively. Anushka's mother, though she did consume what her daughter-in-law gives her as well as taking some food medicines in her diet relevant to her diabetes, explained that medicinal plants are no longer convenient to procure and prepare:

"Before we took it, but now people don't go to the kobiraj. It is difficult to get the ingredients now. There were lots of herbs and bushes before. It's a lot of work. There were lots of plants at my father's house".

Thus while food-medicine use is associated with 'elders' it too is associated with the 'past'. From the interviews, older participants were just as likely as younger participants to feel that medicinal plants are less relevant in today's world, illustrating how medicinal plant use may vary over one's life course. There were reported to be certain periods in one's life when medicinal plants may be used more. For example, before, during, and after childbirth certain plants are sometimes fed used on mothers (as discussed earlier in the chapter). On a different note, the diagnosis of Anushka's mother-in-law's diabetes, and her father's experiencing a heart attack, meant Anushka explored what medicinal food-plants she may cook with food (*methi, kalo jeera, krishna kochu*) as well as cooking with less oil and red meat on the doctor's advice. This example illustrates too how daughters may influence their mother's knowledge. The role of care-giving, and its practical application, is important to understanding medicinal plant usage. Anushka had taken over the principle care giving in the household and therefore learnt what was needed for her in-laws' condition. She did this through actively seeking advice from the doctor and familial networks. Anushka's mother-in-law spoke about forgetting previous knowledge as it is no longer practical, as did Rani's mother. Both Rani and Nurjohan are unmarried and live at home, they both help their mothers at different times in looking after members of the family, and with the cooking. Rani though does look outside of the home for herbal medicines in the form of packaged products, which she thinks are more convenient to prepare and take than the raw materials; this, she says, has been due to the influence of her peers. Halima, though married and with a child, has her mother living with her. Both Halima and her mother are actively involved in cooking and care-giving. While Halima says she has learnt from her mother about the medicinal plants she uses, she also points to school, other relatives and practitioners as sites of knowledge. These examples illustrate how the transmission of knowledge is not nearly as simple as a vertical transmission of knowledge from mother to daughter. There are outside influences as well as the impact of the change in roles and an increase in knowledge as one takes on care-giving activities. Furthermore, knowledge, particularly within families, is often joined as they negotiate and share practices, with illness and health being communal as well as individual.

From the examples above it is apparent that knowledge adapts and changes, being influenced by multiple factors including families (both from mother to daughter and vice versa as well as other family members), by peers and 'knowledgeable' people. Researchers have hypothesised that 'cultural' transmission (of knowledge and beliefs) is vertical (from parent to child), horizontal (between peers), and oblique (from older generations) (Cavalli-Sforza and Feldman, 1981, Reyes-

García et al., 2009). Reyes-Garcia et al (2009) apply this theory to medicinal plants. Singhal (2005), in looking at medicinal plant knowledge in 27 villages in rural India, found that while both men and women were knowledgeable about medicinal plants, the responsibility of collecting, processing, storage and utilisation was feminine. The transfer of knowledge between mother and daughter was often gained through observing and then through practice. The sharing of a similar belief system and norms, as well as confidential knowledge, were means of transferring knowledge. The research presented in this study is similar, in that women appear principally in charge of care-giving in the home and daughters do indeed often learn from their mothers through observation as well as practice. As the daughters (and later daughter-in-law) take over responsibilities, they add to their knowledge and may indeed influence their older family members. They also have many other influences, with knowledge not only being vertical, horizontal and oblique but changing over their life course, as a result of personal circumstances as well as wider public health and transnational processes.

7.10 Place, transnationalism and food-plant knowledge

Place is important in food-plant knowledge. In the UK, Bangladesh (and more specifically Sylhet) was consistently pointed to as a site of medicinal plant knowledge. Once in Sylhet the *gram* (village) was constantly referred to as a site of medicinal plant knowledge. Both places (Sylhet and the village) are metaphorically important, symbolising medicinal plants, the past and home for many. The fieldwork conducted in Sylhet did find that medicinal plant use is widespread, though nuanced and changing. What of rural areas and the perceived rural-urban divide in medicinal plant knowledge? This section explores differences between rural and urban locations according to the participants, with consequent observations. This section also looks at similarities and differences between the places London and Sylhet in food plant knowledge. It also examines the meanings of the place 'London' in the food-plant-medicine-scape of Sylhet.

Throughout the fieldwork I was told by the community groups, participants, my host family and various people I met that medicinal plants are used primarily in rural areas. Research into medicinal plants in Bangladesh does highlight that much of Bangladesh's rural population rely on medicinal plants (Rahmatullah et al., 2010, Rahmatullah et al., 2012b). When visiting Lili's sister in a very rural location in Sunamganj, a neighbouring district though also in Sylhet division, the family there

reported using medicinal plants and frequently visiting the *kobiraj* who lived nearby. Likewise, Halima and her mother both reported using medicinal plants more when in their village home; they both spend much of their time there (it is in the same area of Sunamganj as where Lili's sister lives). Lili's sister and Halima both said that there was no medical doctor nearby and that there was only one pharmacy in the small *bazaar* (which is a one-hour walk from Lili's sister's house). Lili's teenage niece however reported that she does not use medicinal plants, though it is likely that she would have less need for them and, being school age, she did not have many caring responsibilities. The community groups I visited were all rural locations, though within half an hour of a main road to Sylhet town. They reported an increase in going to the doctors and less medicinal plant usage than previously. However, I did find that in each group there were women who knew and used several plants; in three of the villages there were women who were particularly knowledgeable, and would often consult and treat others in the village. In Sylhet town itself, people knew and used plants to differing extents and, despite an availability of allopathic medicine, it was the first port of call. Thus while it does seem from my time spent during fieldwork in semi-rural and rural locations that medicinal plants may be relied upon more than in urban areas, this varies widely depending on many factors including preferences and accessibility to different forms of medicine and plants.

Returning to the places 'London' and 'Sylhet', when looking at transnational families there are important similarities as well as differences, as well as important exchanges. While Anushka and her family do use some medicinal plants, their family in London, while knowledgeable about several similar plants, use fewer medicinal plants. Rosa's aunt (Anushka's aunt-in-law) reported that she no longer uses medicinal plants (apart from occasionally having ginger and lemon tea when she has a cold) as she no longer deems them necessary and has lost faith in them. This attitude is not dissimilar to her sister in Sylhet (Anushka's mother-in-law). She too said she feels medicinal plants are no longer relevant, though she does occasionally use them in food, particularly for diabetes, and when she has a cough or cold. While Anushka uses more food-plants than her sister-in-law Rosa, she does send Rosa *krishna kochu* to eat as well as neem for her acne. Rosa in return sends her multivitamins and creams for their mutual in-laws, which were reported to be more effective than medicines found in Sylhet. From this example there do appear to be similarities in attitudes towards medicinal plants between generations and people of the same age, as well as some exchange of information and medicines. Ruby's and Rani's families too have some similarities. Their mothers reported consuming some of the same food-medicines. There are a few that are not available in the UK, but are known by Ruby's mother and other older participants (*tulsi* and *bashuk* being the most obvious ones). However, Rani's mother, like her sister in the UK, reported that she also has limited

access to food-medicines, being in the town. While Ruby said she used limited food-medicines saying "*I'm not so keen on them, they don't work for me*", she does drink packaged herbal teas when not well. Her cousin Rani knew and used several medicinal plants in food and for coughs and colds. However, she too spoke about plants being packaged for convenience. Roshnara reported no longer using any herbal medicines; her sister Shona in the UK used very few (but more than Roshnara). She said they are not so available in the UK and they have the doctor's medicine. However, she wondered if Roshnara had told me about medicinal plants she uses in Bangladesh, saying "*they do use them back home, we learnt from our elders*". However, it transpired that Roshnara, like Shona, felt that medicinal plants were no longer relevant in her daily life and she instead preferred biomedicine. So what does this tell us? There are similarities both in what is used medicinally as well as in general attitudes towards medicinal plants and health practices between transnational families. There is a wider range of food-medicines available in Bangladesh than in the UK, which is not surprising as, in the UK, medicinal plant knowledge is traced to Bangladesh. As the source of medicinal plants, food-plants are exported from Bangladesh to the UK. This happens less the other way round though, as explored in chapter 5 (supply chains), however medicines are exported from the UK to Bangladesh. Similarities in attitudes, as well as medicines used, indicate that ideas are exchanged and both areas are concurrently changing, influenced by different local factors as well as these local-global⁵³ transnational processes and exchanges.

7.11 Moving forward: addressing key questions

Through the findings presented in this chapter I would like to briefly turn to some of the key questions of the thesis. How do these global links impact local lives? What is the nature of knowledge transmission? How do food and medicine interplay?

The interplay between food and medicine is a complex one that is fluid and changing. Plant and foodstuffs in various forms overlap (medicinal plant, medicinal food, soft food, hard food) dependent on how they are prepared, ingested and to whom they are served. When looking at how knowledge changes and is transmitted, it is important to place it in a holistic context. While mothers and daughters learn from each other they are also influenced by peers, communities and health messages. Furthermore, practical knowledge is often applied in negotiation with family members, and something that may impact one member (for example the diagnosis of diabetes) will in turn

⁵³ Local as they are part of the same family, global because they span continents.

have an impact on what other family members eat and how they care for each other. Health and health practices are not individual but rather communal, embedded in local and global processes. When looking at transnational processes there are similarities and differences between the UK and Bangladesh (London and Sylhet). Indeed, the medicinal plants cited among the UK participants could be found in Sylhet; in this way Sylhet remains a source of knowledge. The exchange of knowledge, and products, across seas means that households remain connected, which is reflected in similar practices and perceptions. The different exchanges, too, serve to re-enforce and maintain their different influences in each place. As the influences of *desh* can be found in the food-medicine-scape in households in London, so too can the influences of exchanges from *bidesh* be found in the food-medicine-scape of Sylhet.

Conclusions

8.1 Overview of findings

The interaction of Bengali women in Sylhet and London with food, medicines and plants illuminates the nature of relations between the two places, the impact of these transnational connections at a local level, as well as the complex characteristics of knowledge exchange. The transnational and intergenerational changes and exchanges of knowledge, physical food-medicines, health beliefs, eating habits and health status were investigated in-depth. The thesis initially explored broad research questions (How do food and medicine overlap? What is the nature of on-going links at a household level? What is the impact of these global links at a local level? What is the nature of knowledge exchange across generations?). Through exploring these broad questions the research highlighted the highly contextual nature of the use of plants as food and/or medicine. How this impacts on one's health and what one consumes is deeply embedded in familial, social and transnational structures. Figure 22 illustrates these key findings in the research. To conclude the research findings this chapter focuses more specifically on the transnational exchanges between the UK and Bangladesh and their meanings and how this changes across generations.

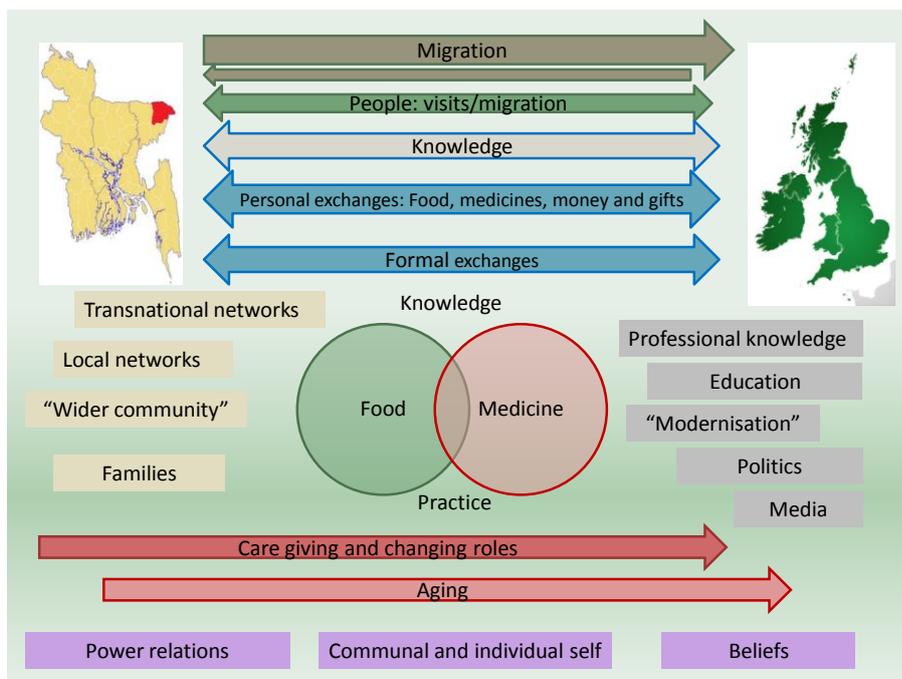


Figure 22: Summary of key findings

Figure 22: Key Findings

The diagram summarises the findings of the study, specifically food-medicine practice and knowledge (represented by the two overlapping circles in the centre). The multiple factors that impact food-medicine practice and knowledge are represented by the boxes and arrows surrounding the central 'food-medicine' interface image. Sylhet and London are connected through transnational flows affecting the food-medicine-scape (illustrated through the Bangladesh and UK maps at the top of the diagram). Transnational flows include people, goods (money, food, plants, medicines, seeds etc.) and knowledge. Some of the contextual and structural factors that affect food-medicine practice are shown on either side of the central food-medicine interface. They include transnational and local networks, the wider community (including mainstream society), family (local and transnational), education, professional knowledge, 'modernisation', media and politics. Care-giving, aging and changing roles over ones life-course (long arrows at the bottom) affect individual and communal food-medicine knowledge and practice. Finally, underpinning everything are fundamental concepts i.e. deeply-held beliefs, power relations and conceptualisation of individual and communal selves (purple boxes at the bottom of the diagram). Though the different factors affecting food medicine practice and knowledge may appear separate entities they are in fact deeply interconnected. For example, the exchange of goods and migration affects local communities while education, professional knowledge and 'modernisation' affects underlying beliefs.

8.2 Transnational and generational factors affecting health

Moving forward from the general overview of the thesis findings, it is the transnational and generational factors and their subsequent impact on one's well-being, health practice and knowledge that are of particular interest to this research. The diagram (figure 23) below illustrates some of the key points on the conclusion. Transnational exchange is of interest, particularly in how it contributes towards discourses around modernity and 'traditional' food-medicine. Inter-generational change highlights the importance of agency in increasing well-being and acquiring what is labelled 'health' capital.

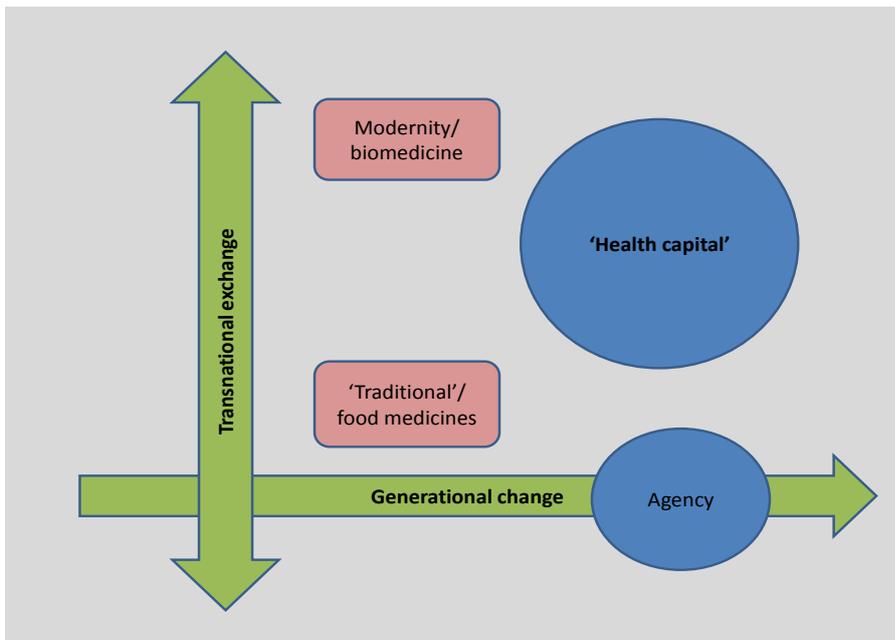


Figure 23: Transnational change and generational exchange

Looking first at transnational exchange; In the UK, Bengalis are a group that have been highlighted in medical literature as suffering from poor health, and particularly from diet-related diseases. As a result 'Bengali food' has often been labelled as 'unhealthy'. This is not only a simplistic, and often unfair, representation of 'Bengali food' but also ignores the high regard and important cultural value that food holds for people. Crucially, food from Bangladesh not only reminds people of 'home' in Bangladesh but continues to connect people to Bangladesh through active on-going exchange networks. 'Fresh' food (either sent or grown) are particularly valued as they powerfully and viscerally embody 'home', rural Bangladesh and identities as Bengalis. Furthermore, 'fresh' vegetables have added health values and serve to fulfil practical needs. Much time and effort are invested into acquiring and growing 'Bengali vegetables' on windowsills, in gardens, on allotments and urban farms. Due to the UK climate and limits to the supply chain, it is impossible to replicate many of the plants grown in Bangladesh; though the challenges to growing, the limited availability of seeds and relatively 'short' growing season means that home-grown fresh garden vegetables have a particularly high personal value.

As gift exchange is reciprocal, there is a constant flow of 'stuff' from London to Sylhet. Items of luxury, remittances and charity are all sent to the UK. The foods of pleasure frequently sent over to Bangladesh (such as chocolates and biscuits) reflect the luxury items. This social capital serves to reinforce the wealth and power of those with links to *bidesh* (abroad). Furthermore the medicines sent from London to Sylhet are representative of a different type of power, namely the modernity associated with bio-medicine. The different types of exchange therefore embody the exchange of different ideas and belief systems; that of rural and 'traditional' medicine and food (loosely regarded as 'Bengali') and modernity as associated with biomedicine and the 'west'. Indeed both these perspectives are present in both the households in London and Sylhet as medical pluralism is played out in both places. However, the homes and practices are clearly impacted and reinforced by on-going transnational exchange. The ability of participants to interact and engage with different medical systems and traditions affects what is labelled as 'health capital' (general well-being, overcoming barriers to health and engagement with services). The acquisition of 'health capital' and changes to well-being is most evident when examining inter-generational change.

The research found generational differences in food-medicine practice. Medical literature has highlighted significant inter-generational improvement among Bengalis in the UK. The UK-based daughters in this study reported generally higher levels of well-being as well as satisfaction and a greater level of confidence in the public health information they have received, than their mothers.

Through looking at the differences between mothers and daughters approach to food and medicines it is possible to unpick some of the reasons for an improvement in well-being. While daughters in the UK reported a more 'mixed' diet than their parents they have not abandoned their parents food-medicine practices, rather combined it with differing perspectives. For example, younger participants to an extent have taken in some of their parents' knowledge regarding 'fresh' food and gardens, however have adapted it into dialogues regarding it as 'organic' and 'natural', concepts that are more in-line with broader UK public opinion.

The thesis outlined many barriers, particularly for older research participants, in achieving 'healthy' diets and receiving health services. They included a lack of seasonal Bengali vegetables, a lack of interactive dialogue with health professionals, difficulties in language, discrimination, isolation and financial pressures. The younger participants, however, faced fewer of these structural difficulties. Furthermore, they reported effectively engaging in different social fields ('health professionals', 'mainstream', family) due to having grown up and being educated both in Bengali households and in the UK. The younger participants therefore were better able to combine different types of knowledge (their parents 'traditional' practices for instance with modern nutritional advice), make 'healthy' choices and engage with the mainstream medical system. It is this greater level of agency and empowerment that significantly increases their 'health capital' and ultimately increases their overall wellbeing.

The research conducted in Bangladesh found less evidence for significant differences in the health of mothers and daughters. Similar to research participants in the UK it was clear that younger participants rather than abandoning their 'traditional' medicine engage with different medical perspectives and update their knowledge. For example, some younger participants reported using packaged herbal remedies, combining a belief in 'traditional' methods with scientific backing (which they believe packaged products have). In Bangladesh while there were some generational differences in diet and food-medicine practice, the research found that younger and older participants' practices were more closely intertwined and similar to each other than their counterparts in the UK, as they share responsibilities in caring and eating. Furthermore, both appear to benefit from the daughters' education and the mothers' increased status in the family (due to age and wealth as Londonis). These enable the Bangladesh-based participants to better access and engage with different health systems and advice. Thus both mothers and daughters appear to have a degree of agency in dealing with their diet and health (being a relatively well-off group, they do not suffer from many of the structural difficulties of their counter-parts in the UK). Rather than a straight

forward improvement in health between mothers and daughters in Bangladesh, both report changing diets and an acquisition of 'health capital' as they share food and practices and navigate different health systems.

8.3 From food-medicine-scapes to health-scapes

This study highlights the many inter-related factors that impact on the food-medicine-scape of Bengali women in London and Sylhet. Particularly important are the transnational gift exchanges between the two places. They serve to reinforce and create kinship networks as well as food-medicine practices and perspectives in each place. Food-medicine knowledge and practice does, however, change across generations. Through looking at how generations differ and interact in regards to food-medicine knowledge and practice it is possible to unpick how different social fields are navigated and how this may affect one's 'health capital'. The participants in this study occupy multiple social fields and spaces, all of which have different values (*doxa*) as well as wider social factors ('*habitus*'). An increase in agency enables one to engage with different social fields and perspectives ('traditional' and 'modern' health beliefs and services, mainstream society, public health messages etc.) and is acquired through many means such as education, literacy, language, social interactions and wealth. The ability to engage with different social fields and perspectives thereby increases one's 'health capital'; that is general well-being, overcoming structural barriers to health, combining and applying multiple meanings to food and plants and the ability to interact with services. This is most evident when looking at the differences in mother and daughter participants in London, as they exercise greater degrees of agency in the multiple health-scapes they inhabit and are therefore able to address many of the structural and other barriers that their mothers face.

I can therefore conclude that the multiple places people inhabit and the exchanges made are important to people's lives and health. How this is negotiated, valued and translated into their lives across both countries and generations is important to understanding people's health and beliefs.

8.4 What next? Implications of the research

The research presented in the thesis is the first (as far as I am aware) to be conducted researching a group of people in both a 'host' and a 'sending' country concurrently looking at food-medicine-scapes. The concurrent inter-generational and transnational approach to the research too is unique. Following familial networks in this way, using a primarily qualitative, ethnographic approach (as opposed to a more quantitative one), is a framework that could be replicated and it has many benefits. It enables researchers to gain a greater understanding of transnational processes on a personal level and the effects they have at a local level (in both places). Regarding health, food and plants, it was clear that local, transnational and familial influences were all interesting and important to understanding the participants researched.

The multi-disciplinary approach to the PhD research is not unique, however it was a very useful approach for this project as different perspectives and disciplines were drawn upon. This research, too, could have important implications for a range of disciplines. As mentioned above, the framework for research could be applied to other studies into migration. The approach could be applied within a range of disciplines when exploring socio-cultural environments influenced by migration including newer disciplines such as food studies and urban ethnobotany as well as the more classical disciplines of anthropology and sociology. For ethnobotanists and ethnopharmacologist the findings regarding the food-medicine overlap will be conceptually interesting. The transformation of a plant from food to medicine and vice versa is highly contextualised. For academia regarding health care and health policy, the findings of this research are important. They illustrate how eating and health care practices are dependent on both local and global transactions with 'links to home' remaining important. However they are embedded in structural and power processes that must be recognised when examining diet and health care practices. Last but not least, for health professionals it highlights the importance of greater dialogue and valuing multiple forms of knowledge, in order to have an effective dialogue and to meet the needs of key stakeholders. The research conducted, however, was on a small scale and while it has important findings, they are context-specific and specific aspects cannot be generalised. Hence there is much scope for future research.

8.5 Closing remarks

The research conducted for this PhD project was highly personal. For myself, it was personal as I travelled between the home of my very early years (Sylhet) and my current home (London). The nature of the research, too, was personal. The participants whose lives I researched had personal attachments to both Sylhet and London in ways that differed from my own. The transactions between London and Sylhet, as well as the food eaten and the caring activities they participated in, were above all personal. These personal activities and transactions have important implications for the local food-medicine-scapes of the places they inhabit. However, what one consumes (as food and medicine) is rarely personal but intertwined with family members as well as transnational and local networks that are embedded in wider structural and power processes as well as multiple social fields; the engagement, negotiation and translations with multiple social fields has a clear impact on one's well being. It is hoped that the thesis has managed to capture a snapshot of the dynamic lives that women of the Sylhet-London space inhabit as related to the food and plants they consume.

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Appendix 1: Interviewee Participant Profiles

This document provides an overview of the participants interviewed as part of the PhD research. It outlines participants' ages, education levels, housing conditions, level of contact with Bangladesh or the UK and any health conditions they were concerned about. This is done to the best of my ability and according to answers provided by participants; it should be noted that many participants (particularly older participants) did not know their ages and were often vague about their level of education.

Participants that were not interviewed are not included in this document.

London interviewees

1. Rosa and her aunt

Rosa was 30 years old at the time of the interview. She has resided in London for over seven years. She came after completing her MA in Anthropology in Sylhet. Her husband is a lawyer and studied at university in London. He now runs an 'immigration advice' centre, mostly dealing with Bengalis. Rosa helps him with the administration. They have one son, aged seven.

Rosa and her husband live relatively comfortably, in a rented two-bedroom house in East London. Rosa says she tries to keep in contact with her relatives in Bangladesh and visits every 2 years. Her family in Bangladesh are well-off, she says she enjoys the freedom of living in London.

Rosa's aunt (Shahanna) has lived in Bangladesh for thirty years and according to Rosa is in her mid seventies. She moved here with her husband who has since died. She lives in a two bedroom council flat alone. She has five grown up children and several grandchildren who visit regularly. She said she did not go to school when she was young. She keeps in contact with Bangladesh by phone, but has only visited three times since moving to the UK.

Rosa reports to be 'healthy' and is concerned about looking after herself. Shahanna, says she is getting old and is overweight.

Rosa's aunt is the sister of Anushka's mother, Anushka and Rosa's mutual mother in-law.

2. Ruby and her mother

Ruby was 23 years old at the time of interviewing. She was born and brought up in London. She has visited Bangladesh twice as a child. She said she found it hard visiting and is unsure if she would like to go again. Ruby completed school but dropped out of university after two years of a degree course. She now works at a shop as a sales assistant. She lives in a one-bedroom flat close to her mother.

The house Ruby and her mother live in is a council property. It has two bedrooms. Ruby is one of four children, only one of the still lives at home. Ruby has only recently left home, her older sister are married with children.

Ruby's mother reported to be in her early 50s. She has lived in the UK for 25 years. She is a house

wife and speaks no English. She is originally from Moulvibazar and grew up in the village. Her husband no longer works but has had various employment in various menial labour jobs. Ruby's mother said she went to primary school in Bangladesh and can read Bangla. She maintains regular contact with her family in Bangladesh and tries to visit every five years.

Ruby appears in good health, her mother says she suffers from high cholesterol.

Ruby's mother and Rani's mother are sisters.

3. Shona

Shona is 45 years old. She moved to the UK 25 years earlier. She is a single mother to an eighteen year old daughter (who I was unable to interview). Shona is educated to degree level and speaks fluent English. She has two part time jobs, as a teaching assistant. She appears in good health and reports that she is. Shona maintains contact with her family in Bangladesh by phone and sending gifts. Her brother, who has recently come over from Bangladesh, lives with her some of the time while he tries to find a job. Shona lives in a one bedroom council property.

Shona is the younger sister of Roshnara.

4. Amira and her daughter

Amira is mid-40s and moved to the UK 20 years earlier. She lives in a three bedroom council house with her husband and three of her five children. Her husband worked in a factory but is now retired. She reports to have very little education as she rarely attended school in Bangladesh. She says she is concerned about her health as she has recently been diagnosed with type two diabetes, has high cholesterol and has heart problems. Amira regularly phones Bangladesh, but has only visited three times since moving to the UK

Amira's daughter, is 17 and still in school. She is unsure if she wants to pursue higher education. She was born and raised in London. She has been to Bangladesh twice, she said she found the heat and the insects difficult. She says Bangladesh are her 'roots' but she feels British as she was 'born and bred' here.

Visits BD

5. Moni

Moni probably in her mid-sixties, she has lived in the UK for twenty years. She lives in a three bedroom house with her three sons and a daughter in-law. Her husband, who use to work in a restaurant before retiring, died several years previously. According to her son she had very little education in Bangladesh. She has limited contact with Bangladesh since her parents died several years ago and has visited twice since moving to the UK.

Bangladesh interviewees

1. Anushka and her mother in-law:

At the time of interviewing, Anushka was 31. She is well educated, having completed a MA in Anthropology. She speaks English fluently. Her husband is also well educated, and works as a lawyer. They have a five year old daughter.

Anushka's mother in-law grew up in the village and was educated through primary school. She is in her early 60s. She has three grown up children and five grandchildren. Her husband is retired from the navy and is involved in 'business'. Anushka's mother has type two diabetes and is worried about her heart (as her husband recently had a heart attack)

Two of Anushka's mother in law's children lives in the UK. One works as a lawyer (Rosa's husband, see above), her daughter is married to a teacher and lives near Manchester. Anushka's father in-law has spent periods of time in England. Anushka has a sister and brother living in the UK.

Anushka and her mother in-law both reside in the same house in Sylhet town, which they moved to from the village around five years ago. They live in a large four bed-roomed house they own. Anushka, her husband and Anushka's in-laws live there. They have two servants, a driver and a guard. Owning the house, their immediate Londoni links and education (of Anushka, her husband and father in-law) all suggest they are a well off 'upper class' family.

2. Rani and her mother:

Rani reported that she was 23 years old and was studying for her masters when I knew her. She lived with her brother, mother and grandmother. They live in a spacious four bedroom flat and have one servant. They also had land in the village, suggesting they are fairly wealthy. Her mother can read and completed primary school. Both Rani and her mother appear in 'good' health.

Rani's father had spent many years in the UK, before he died a few years previously. He was involved in 'business', though I am not sure what type of business. Rani has uncles, aunts and cousins on both her mother's and father's sides in the UK. They regularly make phone calls, exchange items, and visit. They also have family in the USA.

3. Nurjohan and her mother

Nurjohan is a cousin of Rani's on her father's side. Nurjohan was 20 years old when I interviewed her and her mother is in her 50's. Nurjohan, her brother and mother all live in their modern 3 bedroom flat in Sylhet town. They rent the flat but own land in the village. They have two servants. Nurjohan completed school and stays at home, her mother is literate and was educated until she was in high school. Neither report any major health worries.

Nurjohan's father works and lives in the UK and regularly visits. Some of Nurjohan's cousins and aunts and uncles on her father's side live in the UK.

4. Roshnara and her daughter in-law

Roshnara is around 50. She grew up in a remote village and reports having very little formal education. She lives in Shobujpara with her son, daughter in-law and grandson. They live comfortably in a three bedroom modern house. However, they own no land and often struggle for money, as Roshnara's son has an unpredictable job as a stoke broker. Roshnara has high cholesterol and reported having gall stones removed while I was completing fieldwork.

Roshnara's daughter in-law is about 20. She was educated until she was 16. Her parents appear to be relatively well off as they own land and have servants working for them. She has uncles and cousins in both the UK and the USA. Roshnara's two sisters and daughter live in the UK. They keep in regular contact, and most years she has at least one visitor from the UK. Roshnara herself has visited the UK on three occasions

5. Rehenna and her daughter

Rehenna is in her late forties. Her husband has a good job as a manager at a local factory. They live comfortably in a rented three bedroom house, they also own land in the village. Rehenna was educated through primary school. She reported being sick and weak for a long time (unclear with what), she also has diabetes.

Rehenna's daughter was 22 when I interviewed her. She lives with her husband and in-laws in town. She says her in-laws are wealthy as they own a fancy house, have servants and have family in *bidesh*. She was educated until she was 18.

Rehenna has cousins living in the UK, her son-in-law too has cousins living in the UK. Rehenna, has little contact with the UK. Her daughter, however, has more through her in-laws (they visit and bring gifts every year).

6. Halima and her mother

Halima was eighteen years old when I first met her, her mother was forty. Halima lives in a rented house in Shobujpara, as her husband works in a shop nearby. Halima, was educated until she was sixteen. She did not report any health problems.

Halima's mother was 40 when I first met her. During my time doing fieldwork she remained weak and unwell for long periods of time. She grew up in the village, and reported going to school when she was very young.

Halima and her mother live with Halima's four younger siblings and two-year-old daughter. Halima's mother spends her time between the house in Shobujpara and the home in the village. While they live comfortably in their rented four bedroom house and own a little land in the village they do not employ any workers. They primarily rely on income from Halima's father who has been working as a labourer in Dubai for over twenty years. While Halima has aunts and cousins (once removed) live in the UK they do not receive money from them.

Networks

The below diagram, has the interviewees names and arrows between related participants. It visually shows how the participants are connected. The red boxes represent participants of the study who were not interviewed. They are included to illustrate how networks are indeed transnational.

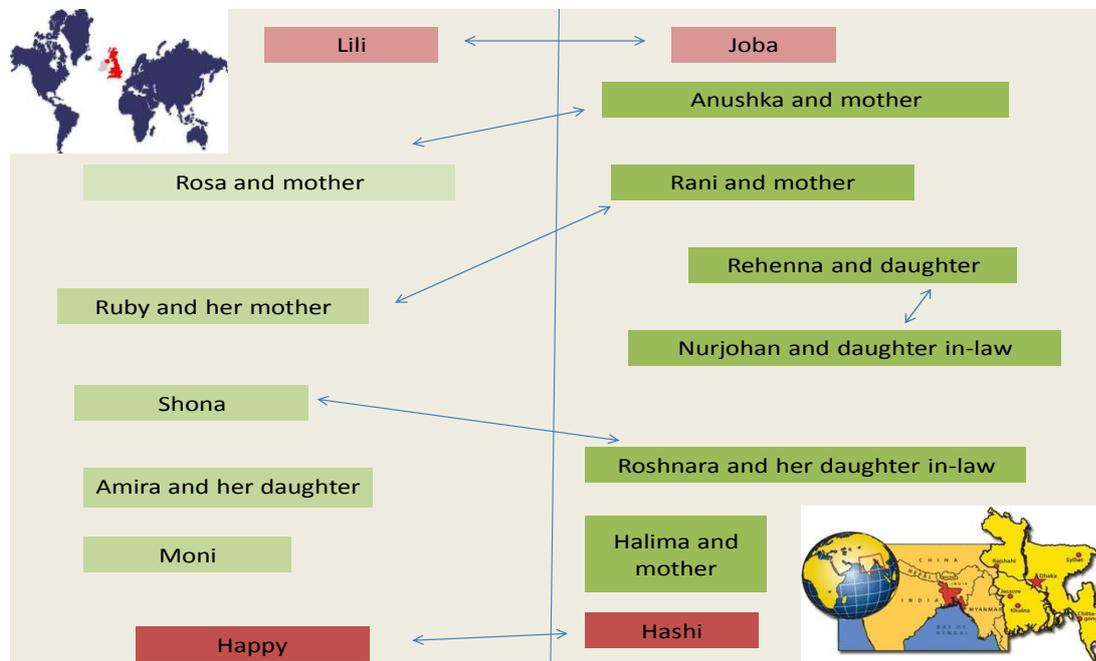


Figure 24: Networks of research participants

Appendix 2: Focus Group Discussion Questions and Topics

Focus group 1: Bengali women's health and medicinal plants

5. What health issues do Bengali women commonly experience?
6. Are there differences between the UK? What? Why do you think that is?
7. What is important in maintaining good health? What food is important in maintaining good health?
8. When you are sick (minor or major illness) where do you go/what do you do? Is that different to Bangladesh? How?
9. Here are some pictures of plants that can be used medicinally (photos on cards of plants)⁵⁴. Can you tell me whether you know what they are and what they are used for? Do you/have you used any? Are there any not here that you know of that can be used medicinally?

Focus group 2: Food and food groups

- Pile sorting activity: participants asked to sort pictures of foods* into three piles (with explanations); 'good' for health, neither good or bad for health, for 'bad' health
- If someone is young and healthy what should they eat? Why?
- If someone is weak/sick what should they eat? Why?
- If someone is pregnant are there foods they should/should not eat?
- How would you classify divide food into groups? Carbohydrates, proteins etc? Digestible and indigestible? Can you explain why?

Focus group 3: Changes and Generations

- When did you move to this country? How has it changed?
- Where do you feel at home? Do you feel 'Bengali', 'English', both?
- Where did your children grow up?
- Do they think of themselves of 'Bengali', 'English', both?
- Are they similar or different to you? In what ways?
- Do they eat similar/different food?

The questions were used as a very rough guideline to stimulate discussion about the broad topics (health, food and generations). The discussions often followed the direction of participants themselves.

⁵⁴ Pictures included lentils, *atta roti* (brown floured flat bread) *paratha* (fried flat bread), oil, egg, mango, banana, potatoes, tomatoes, bitter gourd, rice, tea, ghee, cake, ginger, garlic, milk, fizzy drinks, chillies, fish, chicken, beef, *pilou* and plain rice.

Appendix 3: Questionnaire Used for Preliminary Research in Cardiff

Background information

Name:

Age/age range:

Country of birth:

Age when came to the UK:

Questions

1. What types of plants, foods or spices do you use for medicine or 'good health'?
2. Can you explain how you use them? (*See table below*)
3. Are there any other plants that have a health benefit that you know of but have not used?
What are they and what is their purpose?

Plants used for medicinal/health purposes

Name and part of the plant	What can you treat and prevent with the plant?	How is it prepared and where do you get the plant?	Where did you learn to use the plant in this way? Do your parents/children use these plants?	Other information: How often have you used it in the last four weeks / year? Is it used as a food also?

Appendix 4: Interview Schedules for London and Sylhet

London Interview Schedule

Background information

Name:

Age/age range:

Country of birth:

Age when came to the UK:

1. When did you/your parents come to the UK?
2. To what age were you educated?
3. Do you work? If so what is your job?
4. What is your husband/parents occupation?
5. Who owns your house? What type of house is it? Who lives in your house?

Health beliefs and practices

1. What is important in maintaining 'good' health?
2. What is the main cause of ill health?
3. In the case of a minor illness such as a headache or cold what is your first port of call?
4. In the case of more serious/longer illnesses where would you go?
5. Have you or your relatives ever used an Ayurvedic/unani/Islamic healer? When and for what?

Questions about food

10. Can you tell me what you have eaten in the last 24 hours?
11. Do you normally eat 'English', 'Bengali', 'Western food? Which is which?
12. Who normally decides what you eat at meals?
13. Who normally does the shopping?
14. Who normally does the cooking?
15. Do you grow any of your own food? If so what?
16. Did you grow food in Bangladesh? What?
17. Do you eat different food here to what you ate in Bangladesh? If so, how is it different?

Plants used for medicinal/health purposes

- Have you used any medicinal plants in the last week, month, year? Do you know of any but do not use?
- Are there any that you would use in Bangladesh but not here?

Name and part of the plant	What can you treat and prevent with the plant?	How is it prepared and where do you get the plant?	Where did you learn to use the plant in this way? Do your parents/children use these plants?	Other information: How often have you used it in the last four weeks / year? Is it used as a food also?

Transnational supply chains

1. Do you have food/plants/seeds/other items sent from Bangladesh? If so, what and how often?
2. Do you take food/plants/seeds/other items to Bangladesh? If so, what and how often?

Transnational ties

1. Where do you consider home?
2. Do you consider yourself British, English, Bangladeshi, Asian, Muslim?
3. How often do you go to Bangladesh? When was the last time you went to Bangladesh?
4. How often do relatives visit the UK from Bangladesh?
5. How often do you speak/e-mail relatives/friends in Bangladesh?
6. Do any of your family live in Bangladesh?

Generations

1. Do your children/parents consider themselves British/Bengali/Muslim?
2. What do you consider your children/parents?
3. Do your children/parents eat different/similar food? How is it different/similar?
4. Do you children/parents use food-medicines?

Sylhet Interview Schedule

Background:

- Age; age questions if they don't know
- Social status; house, world bank assessment, education, land, assets
- Family; how many siblings, children do you have? Are your parents alive? Where are your family members?

Health beliefs and medicines

1. What are the causes of 'good' and 'bad' health?
2. Where do you go/what do you do when you or a relative has a minor illness (e.g. cough)?
3. What do you do/ where do you go in the case of a major illness?
4. What medicines or remedies do you take in these cases?
5. Where did you learn about them? Do you know how they work?
6. Do you ever use Chinese/Aurvedic/Unami medicines? If so, where do you get them from? How do they work? etc.

Plants:

1. What medicinal plants do you use/know about?
2. How are they selected? Where did you learn? Do your parent/grandparents neighbours/friends use them?
3. Are there any used as food and medicine?
4. What plants do you grow in your garden? How did you get them?
5. Are any plants grown specifically for health/therapeutic purposes?
6. Are any seeds/plants/food transported to/from the UK? What?

Name and part of the plant	What can you treat and prevent with the plant?	How is it prepared and where do you get the plant?	Where did you learn to use the plant in this way? Do your parents/children use these plants?	Other information: How often have you used it in the last four weeks / year? Is it used as a food also?

Food:

1. What food do you normally eat? What did you eat in the last 24 hours?
2. Are there specific foods for the sick, elderly, young, pregnant? What and why?

Generations:

1. What changes do you see between you and your parents/children/ grandparents?
2. Are practices being passed down?
3. What did you learn from your parents?
4. Did you do things differently when you were younger?
5. Will you do things differently when you are older?

Transnational supply chains/links with the UK:

1. What links do you have to the UK?
2. What are the nature of the links (relatives, phone calls, visits both ways etc.)
3. Do you send/receive substances from the UK? How often, what etc.?

Appendix 5: Voucher Specimens Collected

The following plant specimens were collected from Sylhet and have been deposited to the SOP herbarium:

1. HJ01 - *Momordica Charantia* L., koralla, collected 24/3/11
2. HJ02 – *Centella asiatica* L. (Urb), tankuni/tunimankuni/khudimankuni, collected 25/3/11
3. HJ03 - *Colocasia esculenta* (L.) Schott., kochu, collected 27/3/11
4. HJ06 - *Vitex negundo* L., Nishinda, collected 30/4/11
5. HJ09 - *Terminalia arjuna* (Rox.ex.DC) Wight&Arn., Arjun, collected 11/5/11
6. HJ10 - *Tamarindus indica* L., Tetul, collected 11/5/11
7. HJ11 - *Azadirachta indica* A.Juss, Neem , collected 11/5/11
8. H13 - *Justicia adhatoda* L., Bashok, collected 14/5/11 (three specimens)
9. HJ17 – *Hibiscus rosa-sinesis* L., joba, collected 18/5/11 (three specimens)
10. HJ10 *Lablab purpureus* (L.) Sweet, sheem/uri 4/1/12

Appendix 6: Ethics Application and Approval

Research Ethics Committee

Application Form REC/B (for PhD and Staff projects)

Internal peer-review of research projects with a focus on ethical issues

This procedure for internal peer-review of projects, with a focus on ethical issues, should be followed for:

- *studies involving human subjects, data or material;*
- *studies that would not be subject to review by the NHS*
- *studies that are designated 'evaluation of services' or 'audit'*

The purpose of the procedure is to ensure that all projects (excluding literature reviews) have the benefit of an independent review and that all students and staff, irrespective of the type of study they are conducting, gain an appreciation of the issues and processes of ethical review.

Submission of application for review

Two forms are contained in this application and both must be completed:

1. **Project information form (REC/B/1)**
2. **Review of ethical issues (REC/B/2)**

The completed forms should be submitted to the Research Ethics Committee one month in advance of one of the Committee's quarterly deadlines.

Both forms must be submitted together by e-mail to joanna.obrien@pharmacy.ac.uk

Review and outcome of Research Ethics Committee consideration

The Research Ethics Committee will allocate your application to two independent reviewers, one of whom will be external to your Department. However, you can indicate preference for reviewers on the project information form. The Research Ethics Committee will confirm the outcome of its consideration within 10 working days of the Committee's quarterly deadlines. The outcome will be one of the following options: approval; approval with minor revision; further information required; resubmission required; rejection.

Project Information Form (REC/A/1)

Title of project: Migration, Nutrition and Aging Across the Life-course in Bangladeshi Families: A Transnational Perspective
Name of applicant(s): Hannah Jennings
Name of supervisor (if applicable): Michael Heinrich
Date of submission: 25/09/09
Is this a resubmission? <input type="checkbox"/> yes (please detail specific changes from original submission) <input type="checkbox"/> no
Planned start date for project work: November 2009
Peer review will be by one member of staff in your Department and one external to your Department. You may recommend reviewers if you wish: I would suggest the following peer reviewers due to their experience: David Taylor (Practice and Policy) Sudax Murdan (Pharmacuetics)
Please give the following information about the project:
<ul style="list-style-type: none"> Brief introduction and background to the project <p>The Bangladeshi community in Britain suffers from high levels of disability, obesity and chronic diseases such as type 2 diabetes cardiovascular disease. Little is known about the causes. Most importantly it is not known how changes in eating habits and nutrition related to migration from Bangladesh to the UK contribute to the disease burden. The PhD project will focus particularly on the use of foods, plant based food supplements and herbal remedies among British Bangladeshi women and how it is affected by migration. Our study is part of the project MINA (Migration, Nutrition and Aging Across the Life-course in Bangladeshi Families: A Transnational Perspective.) MINA is a multi-disciplinary project exploring how migration impacts upon nutritional status, food uses and health among different generations of Bangladeshi women living both in the UK and in Bangladesh.</p>
<ul style="list-style-type: none"> Clear statement of the research question and aims and objectives <p>Research question: How does migration from Bangladesh to the UK impact on the use of foods, food supplements and herbal remedies among women of different generations? Overall aim: To gain an in-depth of understanding of Bangladeshi women's practices and beliefs regarding food, food supplements and herbal remedies in the context of aging and migration and to be able to share this knowledge for the benefit of the health of the community. Specific objectives:</p> <ul style="list-style-type: none"> - To document and analyse ethnobotanical knowledge among Bangladeshi women - To document and analyse the use of different foods and health foods among Bangladeshi women

<ul style="list-style-type: none"> - To analyse “emic” perceptions of foods, food supplements and herbal remedies - To compare and analyse the use of foods, food supplements and herbal remedies between women in Bangladesh and the UK - To compare and analyse knowledge between different generations - To share knowledge gained from the project with the community and health professionals - To develop and distribute health advice (i.e. through a booklet) on the basis of the findings from the research.
<ul style="list-style-type: none"> • Study design and methods (e.g. sampling strategy and recruitment; justification of sample size; data collection and instruments; outcome measures; data processing and analysis)
<p>Sample and recruitment: Women will be invited to join through contact made with local community centres. A maximum of 200 women (in the UK and Bangladesh) will be interviewed. This sample size will be large enough to produce data that can be effectively analysed but it is still manageable within the time frame.</p> <p>Data collection: Each interview will take around an hour. The interviews will be recorded and transcribed. Prior to the main interviews short pilot interviews may take place. Participant observation is an important part of the study. Time will be spent at the centres and with the women. More in-depth interviews and discussions with any participants will take place with any women who may chose to do so; this will be a way of gaining more in-depth knowledge.</p> <p>Data analysis: The quantitative data will be managed using SPSS (version 15) and analysed using appropriate parametric and non-parametric statistical tests, including analyses of variance and Kruskal Wallis tests (group differences), Pearson and Spearman correlations (associations), multivariate linear and logistic regression models (predictive models), with controlling for possible confounding variables where appropriate. Thematic analysis will be used to analyse the qualitative data to identify key patterns and themes, which will be linked and categorised in order to make inferences.</p>
<ul style="list-style-type: none"> • Anticipated outcomes and intended value
<p>The value of the research is that we will address gaps in knowledge regarding Bangladeshi women’s food practices, ethnobotanical beliefs and knowledge in the context of aging and migration enabling that will be of practical application for the community and health professionals. Anticipated outcomes include:</p> <ul style="list-style-type: none"> - Share knowledge gained from the project with Bangladeshi communities and health practitioners - Develop and distribute health advice and recommendations (for example through booklets) for the community
<ul style="list-style-type: none"> • Any other relevant information
<p>Other ethical considerations made include:</p> <p>Consent: Written consent will be obtained wherever possible for the research. Consent forms will be provided in English and Bengali. However, verbal consent may be necessary where a participant is unable to give written consent because of literacy ability.</p> <p>Information about the study: Information about the research will be provided</p>

to community centres and participants in advance in writing and verbally (in English and Bengali). This process provides potential participants with an explanation of the voluntary nature of participation, and gives guarantees of confidentiality pertaining to any information gathered. All participants will be informed they have the right to withdraw from the research at any time.

Review of Ethical Issues (REC/B/2)

This review looks at the ethical issues relevant to the project using the Foster framework⁵⁵. This involves the application of three perspectives to the identification and consideration of ethical issues. The form presents three sets of questions that can be used as a guide to identify and address these issues. Please answer all questions that are relevant to the project, describe the issues that arise and how these will be addressed.

Questions to address from a goals-based perspective:

Comment on why the research is important and the anticipated value or application of the findings.

- Why is this study important?
- Justify your study design and methods – why is this the best way to achieve your objectives?
- Comment on the likely strength of your findings. To what extent do you think they will be representative and accurate?

The study is important as it is researching an area that has been widely neglected and is therefore filling a knowledge gap. Furthermore the study will have practical application and the findings will be used to disseminate knowledge with the intention of improving the overall health of the Bangladeshi community.

Interviews are an effective way of acquiring knowledge from a number of people that can be analysed. Participant observation will enable the project to gain more in-depth information.

The strengths of this project is that the findings will be detailed increasing the overall understanding of the issues it addresses. The sample may not be completely representative of the community as it is the community centres that will be targeted. However it is hoped that a cross-section of women from different generations will be interviewed. The aim of the project is to uncover what knowledge is present in the community and how it is affected by migration and aging, the accuracy can be checked through literature and existing knowledge.

⁵⁵ Foster C (2001) *The Ethics of Medical Research on Humans*. Cambridge: Cambridge University Press

Questions to address from a duty-based perspective:

Comment on what you are asking of research subjects, how reasonable this is and how you will address any concerns they might have.

- Is what you are asking of your respondents/ participants reasonable?
- What will participating in the research involve?
- How much time will it require?
- How intrusive might any interview, questionnaire, observation, or other data collection be?
- What will you do with the information?
- What are the risks to participants? Are they acceptable?
- What are the risks to you in carrying out the research? Are they acceptable?
- What happens if someone complains or something goes wrong?

- We believe what we are asking the participants is reasonable; they will be informed before taking part in any research and can withdraw at any stage.
- Participating will primarily involve being interviewed for up to an hour. Some participants may be involved in further discussions that will be informal during any participant observation.
- Topics covered in the interview may or may not be viewed as sensitive; questions asked will be around use and beliefs regarding foods, health foods and herbal medicines. Participants will be informed of the type of questions that will be asked prior to participating in the research. In the event that a participant becomes distressed during an interview, the interviewer will console the individual and ensure she is offered appropriate support. Following each interview there will be an opportunity provided for answering any questions which the participants may have. If participants request further sources of help or information, they will be provided with appropriate contacts.
- The information will be recorded, analysed and disseminated as a whole. Individual answers and information will remain confidential.
- There are no obvious risks to the participants or the researcher.
- On-going communication with the centres, a pilot study and encouraging feedback throughout the process will take place throughout the research in order to avoid any problems. If a complaint is made it will be discussed and hopefully resolved with the participant, centre and researcher.

Questions to address from a rights-based perspective:

Can participants make an entirely voluntary and informed choice about whether or not to take part?

- Is an information leaflet supplied that conforms to accepted guidelines?
- Is there an opportunity to ask questions?
- What steps will you take to ensure confidentiality/ anonymity (e.g. with regard to data protection legislation)?
- Are potential participants free to make their own decision: e.g., time to decide, no incentives, concerns about consequences or taking/not taking part or feelings of obligation?

- There will be a leaflet provided to the centres prior to the interviews explaining the research taking place.
- There will be opportunities for the participants to ask questions throughout the research period.
- **During interviews and other forms of research we will reassure participants that confidentiality will be maintained at all times and that any information shared with other professionals involved in the research will remain anonymous.**
- Participants will be informed about the study at least two weeks before interviews take place. It will be emphasised to them that participation is completely voluntary and no incentives will be given.

Appendix 7: Plant List

Scientific name (Plant family)	Common names: Bangla /English	Therapeutic Uses	Parts used and preparation	Food and/or medicine?	Place/s of use (UK and/or BD)	Additional information
<i>Abelmoschus esculentus</i> (L.) Moench (<i>Malvaceae</i>)	<i>Bindi</i> Okra	General health	Fruit cooked in food	Food	UK	
<i>Abroma augusta</i> (L.) L.f. (<i>Malvaceae</i>)	<i>Ulot</i>	Vaginal discharge Menstrual regulation	Whole plant – crushed and made into tablets or paste and consumed	Medicine	BD	
<i>Aegle marmelos</i> (L.) Corrêa (<i>Rutaceae</i>)	<i>Bel</i>	Dysentery; ‘cools’ the stomach	Fruit - ripe fruit juice, The young fruit is sundried, sliced, soaked overnight, and the water is drunk.	Medicine	BD	
<i>Allium sativum</i> L. (<i>Amaryllidaceae</i>)	<i>Roshun / Garlic</i>	General health CVD/heart: general health of the heart, hypertension Sore throat Stomach pain/upsets Headache	Cloves: normally consumed alone, sometimes with specific instructions (i.e. an empty stomach, time of use etc.) Commonly consumed in food. Crushed with ginger (for coughs) Crushed, made into a paste and put topically on the head for headaches	Food and medicine	BD and UK	
<i>Aloe vera</i> (L.) Burm.f. (<i>Asparagaceae</i>)	<i>Gritikumari</i>	General health Diabetes Skin: general, revitalise, dry skin, itchiness Constipation	The pulp from the leaves is applied topically to the skin. The pulp can also be made into a drink and consumed	Medicine	BD and UK	<i>Aloe vera</i> is also sold commercially as pills, drinks and gels in both the UK and BD
<i>Areca catechu</i> L. (<i>Areaceae</i>)	<i>Shupori, gua</i> (Sylheti) Betel nut	Heart: general health Digestion	Seed/nut soaked in water, water is then dunk Seed/nut crushed and consumed	Medicine (recreational)	BD	Frequently consumed in the UK recreationally
<i>Averrhoa carambola</i> L. (<i>Oxalidaceae</i>)	<i>Kamranga</i> Carambola / starfruit	Dizziness Vaginal discharge	Fruit – made into a paste and applied topically Bark – crushed and made into a drink (for vaginal discharge)	Medicine	BD	
<i>Azadirachta indica</i> A.Juss. (<i>Meliaceae</i>)	Neem (in both Bangla and	General health Diabetes Pain/ <i>bedne</i> Arthritis	Leaves – crushed; applied topically to the skin, made into a paste or tablets and	Food and medicine	BD and UK	

	English)	Hypertension Toothache Skin: allergies, measles, chicken pox Stomach upsets/diarrhoea/ vomiting	consumed, cooked with food, Fruit - eaten Bark – crushed and applied topically			
<i>Brassica juncea</i> (L.) Czern. (<i>Brassicaceae</i>)	<i>Sherash</i> Mustard	Skin: dryness, general health, itchiness	Oil from seeds – applied topically	Medicine	BD and UK	
<i>Centella asiatica</i> (L.) Urb. (<i>Apiaceae</i>)	<i>Tankuni</i> <i>Tunimanku</i> <i>ni</i> (Sylheti) <i>Kudimanku</i> <i>ni</i> (Sylheti) Indian pennywort	Stomach pains and upsets General health	Whole plant – normally cooked in food or crushed as a <i>bhorta</i>	Food	BD	
<i>Cicer arietinum</i> L. (<i>Leguminosae</i>)	<i>Chana</i> Chick peas	Skin: general health, dry skin	Seeds (as a flour) are made into a paste and used topically	Medicine (cosmetic)	UK	
<i>Cinnamomum</i> <i>tamala</i> (Buch- Ham) T. Nees & Ebern. (<i>Lauraceae</i>)	<i>Tej pata</i> Indian bay leaf	Coughs and colds	Leaves – drunk as a tea	Food	BD	
<i>Cinnamomum</i> <i>verum</i> J. Presl. (<i>Lauraceae</i>)	<i>Darchini</i> Cinnamon	Sore throat Cold Diabetes	Bark – is consumed in a tea (with hot and sometimes other items such as ginger and honey) Consumed in food	Food	BD and UK	
<i>Citrus limon</i> (L.) Burm. f. (<i>Rutaceae</i>)	<i>Labu</i> Lemon	Cough Cold General health Weight loss Skin: to keep it healthy, acne 'Cool' the head (fevers) Dizziness	Fruit juice: taken orally in teas or in food Applied topically for skin conditions and to 'cool' the head or to reduce dizziness	Food And medicine	BD and UK	
<i>Cocos nucifera</i> L. (<i>Areaceae</i>)	<i>Dab/</i> <i>naracal</i> Coconut	High cholesterol Diarrhoea Toothache	The juice consumed regularly (cholesterol) or as needed Leaves crushed and applied topically	Medicine	UK and BD	
<i>Colocasia</i> <i>esculenta</i> (L.) Schott (<i>Araceae</i>)	<i>Kochu/</i> <i>Krishna</i> <i>kochu</i> Taro	General health Increase blood circulation Stop itchiness and rashes	Leaves, stems and rhizomes are all eaten in food Leaves are soaked in water, which is then applied topically	Food and medicine	BD and UK	<i>Kochu</i> is grown in the UK
<i>Curcuma longa</i> L. (<i>Zingiberaceae</i>)	<i>Hollud</i> Turmeric	Antiseptic for wounds 'Fights' cancer cells	Rhizomes – boiled and ground, or can be purchased as a powder It can be made into a paste and applied topically		BD and UK	Can also be found in Ayurvedic creams

<i>Corchorus olitorius</i> L. (Malvaceae)	<i>Nali shak</i> Marrow leaves/jute	General health	Leaves are eaten as a vegetable	Food	UK	Also consumed in BD as a food
<i>Coriandrum sativum</i> L. (Apiaceae)	<i>Dhonya</i> Coriander	Stomach digestion General health	Leaves, stalks and seeds are eaten as food	Food	BD and UK	Frequently grown in the UK
<i>Carica papaya</i> L. (Caricaceae)	<i>Paypay</i> Papaya	Stomach: digestion Fever	Fruit is consumed	Food and medicine	BD	
<i>Elettaria cardamomum</i> (L.) Maton. (Zingiberaceae)	<i>Elachi</i> Cardamom	Cold	Seedpod – normally drunk as a tea (often with other item such as ginger and cinnamon)	Food	BD and UK	
<i>Justicia adhatoda</i> L. (Acanthaceae)	<i>Bashuk</i>	Cough Cold Sore throat	Leaves are crushed – they are drunk with hot water (and sometimes <i>tulsi</i>) or taken as a paste	Medicine	BD	
<i>Hibiscus rosa-sinensis</i> L. (Malvaceae)	<i>Joba phul</i> Hibiscus	Diabetes Wounds/bleeding Skin rash	Flower is crushed – made into a paste and consumed or applied topically	Medicine	BD	
<i>Lablab purpureus</i> (L.) Sweet. (Leguminosae)	<i>Sheem/uri</i>	General health Anti-septic/wounds	Fruit and seed eaten in food Leaves crushed and made into a paste and applied topically	Food and medicine	BD and UK	Grown frequently in both the UK and BD
<i>Lawsonia inermis</i> L. (Lawsonia)	<i>Henna</i> Mendhi	Jaundice Burns	Leaves crushed, made into a paste and applied topically	Medicine	BD and UK	More frequently used in BD
<i>Lens culinaris</i> Medik. (Leguminosae)	<i>Daal</i> Lentils	'Cool' the head (fevers)	Seeds cooked and applied topically	Medicine	BD and UK	
<i>Mentha arvensis</i> L. (Lamiaceae)	<i>Podmina</i> Mint	Stomach pains General health	Leaves are consumed in a tea or in food	Food	UK	
<i>Mentha longifolia</i> var. <i>asiatica</i> (Boriss.) Rech.f. (Lamiaceae)	<i>Podmina</i>	Stomach: pains, increase digestion	Leaves are made into a paste and consumed, can be consumed in food Made into tablets and taken regularly Drunk as a tea	Food and medicine	BD	
<i>Momordica charantia</i> L. (Cucurbitaceae)	<i>Korala</i> Bitter gourd	Diabetes General health High blood pressure Stomach pains/upsets	Fruit is cooked in food, as a drink or raw by itself	Food and medicine	BD and UK	
<i>Nigella sativa</i> L. (Ranunculaceae)	<i>Kalo jeera</i> Black cumin	Diabetes Stomach: pains, 'weak stomach', bloated stomach Lack of appetite Aches and pains	Seeds – ground, eaten in food or consumed alone (or with honey) Oil – applied topically	Food and medicine	BD and UK	I was told in the Koran it says of <i>kalo jeera</i> "It can cure everything except death"
<i>Piper nigrum</i> L. (Piperaceae)	<i>Gul morich</i> Black pepper	Coughs Cold Fever	Fruit and seeds – ground and consumed, soaked in hot water and drunk	Medicine	BD	
<i>Phyllanthus</i>	<i>Amloki</i>	Increases appetite	Fruit is consumed	Food	BD	

<i>emblica</i> L. (<i>Phyllanthaceae</i>)	Bengal quince	Stomach upsets Coughs General health				
<i>Ocimum basilicum</i> L. (<i>Lamiaceae</i>)	Basil	General health	Leaves are consumed in food	Food	UK	
<i>Ocimum gratissimum</i> L. (<i>Lamiaceae</i>)	<i>Rojat</i>	Post-partum recovery General health Stomach pains	Leaves are consumed in food	Food	BD and UK	Is specific to Sylhet
<i>Ocimum tenuiflorum</i> L. (<i>Lamiaceae</i>)	<i>Tulsi</i> Holy basil	Coughs, colds Dizziness	Leaves crushed and made into a paste or a tea (often with <i>bashuk</i>) and consumed	Medicine	BD	
<i>Piper betle</i> L. (<i>Piperaceae</i>)	<i>Paan</i>	Digestion	Leaf is consumed	Medicine (recreational)	BD	Frequently consumed recreationally in the UK
<i>Syzygium abbreviatum</i> Merr. (<i>Myrtaceae</i>)	<i>Long Cloves</i>	Colds Coughs	Cloves (dried flower buds) – taken as a tea	Food	BD	
<i>Tamarindus indica</i> L. (<i>Leguminosae</i>)	<i>Tetul</i> Tamarind	Diabetes/reduce sugar Headaches General health Cholera	Fruit – can be consumed in a drink, in food or by itself Can be applied topically	Food and medicine	BD and the UK	It can also be bought in tablet form
<i>Terminalia chebula</i> Retz. (<i>Combretaceae</i>)	<i>Hortoki</i>	Increases appetite General health	Fruit is eaten	Food	BD	
<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn. (<i>Combretaceae</i>)	Arjun (in both English and Bangla)	Heart: general health of the heart	Bark – is crushed and taken alone, can be taken in a drink	Medicine	BD	
<i>Trigonella foenum-graecum</i> L. (<i>Leguminosae</i>)	<i>Methi</i> Fenogreek	Diabetes Stomach pains Pain/ <i>bedne</i> General health	Seeds – crushed, taken alone or added to food Leaves – added to food	Food and medicine	BD and the UK	
<i>Vitex negundo</i> L. (<i>Lamiaceae</i>)	<i>Nishida</i>	Toothache Asthma	Leaves – crushed and applied topically, Boiled and consumed	Medicine	BD	
<i>Zingiber officinale</i> Roscoe. (<i>Zingiberaceae</i>)	<i>Adda</i> Ginger	Coughs Sore throat Colds General health	Rhizome – most frequently consumed as a tea (sometimes with other items such as lemon, cinnamon and honey) Grated and taken alone Consumed with food	Food and Medicine	BD and the UK	
Indet.	<i>Bara pata</i>	General health	Leaves are cooked in food	Food	UK	Reported to be sent from BD
Indet.	<i>Eingazol</i>	Stomach upsets	Leaves are cooked with food	Food	BD	Grown in gardens
Indet.	<i>Keri pata</i>	Anti-septic: treats abscesses and wounds Hair: health, growth	Leaves – crushed, made into a paste and applied to wound or eye	Medicine (cosmetic)		I was also told about this in the UK

		and kills lice Eye: styne	leaves mixed with hot water and applied to hair			
Indet.	Pneumonia <i>gach</i>	Breathing difficulties Generally weak and unwell	Leaves – crushed and applied topically			