

**FACTORS INFLUENCING MIGRANT MATERNAL AND INFANT
NUTRITION IN CAPE TOWN, SOUTH AFRICA**

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In loving memory of my grandmother, Flora Keen

1923—2012

Abstract

Migration is a social determinant of health. The relationships between migration and health are not well understood for the large numbers of migrants in low- and middle-income countries, including South Africa. In particular, nutrition during pregnancy and the first two years of a child's life impact infant morbidity (e.g. diarrhoea, chronic disease) and mortality, yet little is known about maternal and infant nutrition in relation to migration. Positing that migration alters the family structures that traditionally provide social support and advice for mothers, this study was framed in terms of migrants' loss of these social supports in Cape Town. This framing provided context for the broader investigation of migrants' nutrition during pregnancy and the first two years of their infants' lives.

This qualitative study with migrants from the Democratic Republic of Congo (DRC), Somalia, and Zimbabwe included 23 in-depth interviews with recently (<2 years) postpartum women, and nine focus groups with adult men (N=3; n=21) and women (N=6; n=27). While in-depth interviews provided insights into individual nutritional motivations, focus groups provided insights into the social context of nutrition. Language interpretation was used in cases where participants did not speak English. Interviews and focus groups were recorded and transcribed verbatim; bilingual research assistants checked the quality of language interpretation and transcription. Rooted in notions of social constructivism, thematic analysis guided the development of a codebook of themes and subthemes. These analytic themes were grouped in relation to (1) maternal nutrition, (2) infant nutrition, and (3) past and present social support. Thereafter, a "thick description" involved interpreting key themes and producing the narrative that integrated focus group data and in-depth interview data.

Analysis of maternal nutrition involved documenting foods consumed during pregnancy, as well as investigating the motivations that undergird nutrition during this period. The findings related to migrant maternal nutrition affirmed and built on previous research, which suggested that pregnant women generally maintained their previous non-pregnant eating habits. While cravings were dominated by self-perceived "traditional" foods of home, that were expensive and hard to find in Cape Town, women also commonly described consumption of fast foods and junk foods during pregnancy. Participants did not mention food scarcity, despite the fact that some migrants appeared to be food insecure. These findings illuminated the role of the nutrition transition in Cape Town, that is, migrants were at risk of consuming energy-dense, nutrient-poor diets, particularly during pregnancy.

Secondly, analysis of participants' experience of breastfeeding, formula feeding, and complementary feeding took place in the context of high rates of breastfeeding initiation but low rates of exclusive breastfeeding in many parts of Africa, including migrants' countries of origin. In this study, migrants presented the common decision to introduce formula in light of their experiences of Cape Town as a work environment. Participants framed the introduction of formula and complementary food early in an infant's life as primarily a pragmatic and intuitive decision in response to their infant's cues. Whereas past studies conducted in LMIC tend to present breastfeeding as an important intervention to improve child "survival", participants in this study were not primarily concerned with child survival. Rather, they were concerned

with their family's tenuous circumstances in Cape Town. As such, efforts by the health system to promote breastfeeding amongst migrants should emphasize benefits to long-term health as well as the short-term financial costs of formula feeding. However, I argue that this shift cannot occur without recognition of, and attention to, migrants' pressing short-term needs, including housing, legal work status, and safety.

Another important factor influencing maternal and infant nutrition revolved around the loss of social support, particularly the loss of the elder generation. Elder women played a central role in providing physical, social and informational support to new mothers in migrants' countries of origin. As such, the absence of grandmothers in migrant communities in Cape Town was central to understanding participants' maternal and infant nutrition decisions. Yet participants focused on the loss of household help, including cooking, rather than on grandmothers' traditional authority or nutritional advice. Given the relative absence of the older, nonworking, generation in Cape Town, community support was limited by the pressures of work and survival. These pressures seemed to make healthy nutrition during pregnancy, or exclusive breastfeeding very difficult. Given this lack of support, medical providers presented one avenue of additional support. However, migrants were frequently unable to communicate with health care providers, and felt discriminated against and unwelcome in the health care system.

The three primary findings relating migration and maternal and infant nutrition in Cape Town suggest several avenues for intervention and further study. Firstly, migrants' descriptions of energy-dense, nutrient-poor diets suggest a role of policy-makers to improve the overall accessibility, availability, and affordability of more nutritious food to the poor in Cape Town. Recognising that foods from migrants' countries of origin were of particular cultural and nutritional value, a smaller scale intervention might involve creating space and time for the preparation of "traditional" foods. Secondly, improving infant feeding involves re-orientating migrants towards the long-term benefits of breastfeeding and complementary feeding, and engaging spouses and male partners as integral to this process. Further research is needed to create a strong evidence base for the increasing rates of breastfeeding, both in Cape Town and in other urban centres in LMIC. Thirdly, given self-described social isolation and poor experiences in healthcare settings, free-to-patient medical interpretation may play an important role in connecting migrants to both healthcare services as well as broader social services. The improved communication facilitated by medical interpretation may also play a role in combatting the xenophobia that migrants face, both in the healthcare setting as well as in daily life. Indeed, my recommendations must be part of a broader public health research effort to explicate the negative health consequences of xenophobia. To design appropriate research and interventions for migrants, it is important to acknowledge the overarching roles played by xenophobia, legal status, and the broader socio-economic context in shaping maternal and infant nutrition.

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To our sons Noah and Eli. May this be symbolic of our many great adventures together!

List of Acronyms and Abbreviations

BMI- Body Mass Index

DoH- Department of Health

DRC- Democratic Republic of Congo

EU- European Union

FGC- Female Genital cutting (also referred to as female circumcision and female genital mutilation)

GMO- Genetically Modified Organism

HIC- High-Income Countries

HRW- Human Rights Watch

IOM- International Organization for Migration

IUGR- Intrauterine Growth Restriction

LBW- Low Birth-Weight

LMIC- Low- and Middle- Income Countries

MDGs- Millennial Development Goals

NGO- Non- Governmental Organisation

NPO- Non-profit Organisation

SADC- Southern African Development Community

UCT- University of Cape Town

UK- United Kingdom

UN- United Nations

OHCHR- Office of the United Nations High Commissioner for Human Rights

UNHCR- United Nations High Commissioner for Refugees

UNICEF- United Nations Children's Fund

TBA- Traditional Birth Attendant

WHO- World Health Organization

Glossary of Terms

Antenatal care

Also known as prenatal care, referring to health care provided to a woman during pregnancy.

Asylum Seeker

Individual who seeks asylum, or refugee status, in the receiving country, and is awaiting status determination.

Cross-border trader

Individuals who move across an international border for the purpose of trade.

Immigrant

“Migrants (see migrant) are referred to as ‘immigrants’ when the speaker positions themselves in the place to which migrants are settling. The term ‘immigrant’ thus describes the move relative to the destination. Immigrants can be internal (see internal migration) or international (see international migration).” (Urquia & Gagnon, 2011, p.470)

Irregular Migrant/Undocumented Migrant

“Irregular migrant (also illegal, undocumented or unauthorised): a migrant whose current residence status is characterised by non-conformity with the immigration laws of the receiving country, regardless of their mode of entry. Irregular migrants constitute a vulnerable subgroup, particularly due to their limited access to healthcare and/or other public services available to legal international migrants” (Urquia & Gagnon, 2011, p.470).

Labour migrant

A person who moves from their home country to another, or within their own country of residence, for the purpose of employment

Maternal

The period of pregnancy, labour and childbirth, as well as the postpartum period which typically extends six weeks after childbirth.

Migrant

A person who has established a (semi-) permanent new residence in a ‘place’ other than that in which they habitually lived (Urquia & Gagnon, 2011, p.470).

Overweight (In children under age 5)

Weight < +2 z scores of the median (corresponding to above the 97.7th percentile) WHO child growth standards (World Health Organization (WHO), 2010).

Post-partum

After birth, typically referring to the first six weeks following delivery, but sometimes extending to include the first year.

Refugee

A “refugee” is defined by the 1951 United Nations (UN) definition as a person who, “owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality, and is unable to or, owing to such fear, is unwilling to avail himself of the protection of that country or return there because there is a fear of persecution...” (Convention relating to the Status of Refugees, Art. 1A(2), 1951, as modified by the 1967 Protocol).

Seasonal migrant worker

A migrant worker whose work by its character is dependent on seasonal conditions and is performed only during part of the year (Art. 2(2)(b), International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families, 1990).

Stunting

Height or length < -2 z scores of the median (corresponding to below the 2.3rd percentile) WHO child growth standards (WHO, 2010)

Underweight

Defined as weight < -2 z scores of the median (corresponding to below the 2.3rd percentile) WHO child growth standards. (WHO, 2010)

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Chapter 1: Background and introduction

Background

Globally, an estimated four million newborns and approximately 7 million children under age five die every year, many due to preventable or treatable causes (Silal, Penn-Kekana, Harris, Birch, & McIntyre, 2012). The problem of child morbidity and mortality is even more complex in the case of migrants, who may be exceptionally vulnerable. Undernutrition is implicated in more than one third of deaths in children under the age of five, as well as in maternal mortality (United Nations Childrens Fund (UNICEF), 2009, p.3). Undernutrition in utero and during the first 24 months of life also leaves children more susceptible to disease (UNICEF, 2011; Engle et al., 2007). Thus nutrition is central to the problem of excess childhood morbidity and mortality.

Attempts to address this problem of both maternal and infant mortality in low- and middle-income countries (LMIC) has involved a public health policy conversation that has until recently focused on “survival” (Doherty et al., 2012; Gupta, Dadhich & Faridi, 2010; Bhutta et al., 2008). In high-income countries (HIC), however, as a result of much lower rates of infant and child mortality, the public health policy conversation has been much broader, with a focus on the relationships between nutrition and illness, economic productivity, increasing a child’s IQ and other neurodevelopmental goals; in summary, focusing on “developmental potential” (Brion et al., 2011; Quinn et al., 2001; Vestergaard et al., 1999). Yet paying attention to these broader developmental goals is also an essential part of promoting greater social and health equity for those in LMIC (Black et al., 2013).

Improving maternal and infant nutrition with children’s developmental potential in mind cannot be done without first understanding how families currently navigate nutritional choices during pregnancy and during the first 24 months of life. For migrants, navigating these choices is even more complex, as it involves bringing together past nutritional practice, experiences in one’s home country, and present circumstances. Few studies have sought to understand maternal or infant nutrition in the context of migration (Dennis, Gagnon, Van Hulst, & Dougherty, 2012; McFadden, Atkin & Renfrew, 2014), and to my knowledge, none have taken place in LMIC.

Migration and health

While human migration has always been part of our history, the circumstances, motivations, and physical realities involved in migrating from one place to another, and thus the health implications of migration, are dynamic and diverse. In recent history, migrant health policies have been exclusory, with a focus on security and disease control by individual governments (Lopez-Acuna, 2013). In fact, in the context of migration from poor countries to rich countries, there is a long tradition of considering immigrants as “disease carriers”, where they are seen as transporting the diseases of home to the new country (Kraut, 1995; Sargent & Larchanché, 2011; Vearey & Nunez, 2010). This orientation has recently shifted to one of social protection: as the 61st World Health Assembly Resolution rightly noted, a growing commitment to health equity lies at

the core of migrant health, and contributing to greater health equity for migrants involves illuminating the mechanisms through which migration affects health (e.g. through changes in diet).

In 2010, there were an estimated 213 million cross-border migrants globally (Urquia & Gagnon, 2011). One-third (73 million) of these migrants moved between countries in the global “south” or from one LMIC to another (Ardittis & Laczko, 2012). Taken together, the global population of cross-border migrants would make up the fifth largest country in the world. Despite the fact that South-South migration is almost as common as South-North migration, and that nine out of ten refugees live in “developing” countries (United Nations Department of Economic and Social Affairs, Population Division, 2012), the migrant health literature is dominated by studies set in HIC. In these studies based in HIC, there is strong evidence to suggest that, over time, migrants experience poorer health outcomes than their native-born counterparts (Sargent & Larchanché, 2011). More studies of migrant health in LMIC are necessary to better understand the relationships between migration and health.

Studying the health of migrants in South Africa contributes to both the broader literature relating migration and health in LMIC, as well as to an understanding of migrant experiences in South Africa. South Africa is an important destination country for African migrants because of its economic prosperity and political stability relative to other parts of Africa. According to the Consortium for Refugees and Migrants in South Africa (2009), there are between 1.6 million and 2 million cross-border migrants in South Africa, which is about 3.4% of the total South African population. In Cape Town, the migrant population includes migrants from all over Africa, including Somalis, Congolese (DRC), and Zimbabwean migrants, the three populations sampled in this study. In Cape Town, there are between 123,969 and 328,767 foreign-born individuals (Statistics South Africa, 2012).¹ This is between 3.3 and 8.8% of the municipality’s 3.7 million population. Cross-border migrants are therefore an important minority in South Africa generally, and in Cape Town specifically. This study focuses specifically on cross-border migration in order to assess the context of nutrition given altered social, culture and linguistic contexts, as well as potentially tenuous legal status. While some cross-border migrants may have refugee status, the political nature of status determination means that it does not necessarily speak to a difference in the lived experience of the person travelling. As such, the term “cross-border migrants” (sometimes referred into this dissertation as “migrants”) includes those with official refugee status in South Africa, those who seek asylum after arrival in South Africa and are waiting for their case to be determined, and those who are undocumented or who receive work or study permits to remain South Africa.

In the emerging literature focused on migration and health in LMIC, studies of HIV and mobility have taken centre-stage in the South African migrant health literature (Vearey, 2012, Lurie et al., 2003a; Lurie et al., 2003b; Crush, Williams, Gouws & Lurie, 2005). A cyclical approach to migration in a Southern African context offers a useful framing of the health implications that may exist at various points in the migration

1 This large margin includes 204,798 people whose country of birth remains unspecified. With the lower estimate, none of the “unspecified” are counted as foreign-born, whereas with the higher estimate, all are counted as foreign-born. The reality is likely to be somewhere in the middle. Notably, the children of foreign-born individuals would not be counted in this number.

process. (Vearey, Palmary, Thomas, Nunez, & Drimie, 2010a). This approach explicitly includes impacts on health linked to the pre-migration phase, the movement phase, arrival and integration phase, and the return phase (ibid.). In the “arrival and integration phase”, cross-border migrants experience xenophobia and are vulnerable to social marginalization and to exclusion from mainstream health services (Ascoly, Van Halsema & Keysers, 2001). Yet the broad impact of these experiences on health is not well understood in South Africa, and studies of migrant health in other African countries are scarce. Given the importance of maternal and infant health for long-term health, understanding and responding to challenges to migrant maternal and infant nutrition is vital to improving the health of migrant populations in LMIC. As such, this study investigated the lived experiences of migrants in Cape Town and explored the relationships between these experiences and maternal and infant nutrition.

Maternal and infant nutrition in the context of migration

Recognising the many and varied interactions between migration and health, in Figure 1 I present a framework for maternal and infant nutrition in the context of migration. I propose that there are established relationships between migration and social support, socioeconomic status, as well as the food environment. These relationships will be explored in more depth in Chapter 2: Literature Review.

There is also strong evidence to suggest that maternal and infant nutrition is affected by family and community support. Recent studies of maternal and infant health in LMIC suggest that health-producing practices are shaped by the household (Aubel, 2012). Within the household, grandmothers have been identified as vital influences on maternal and child nutrition, particularly in non-Western settings (Aubel, Toure & Diagne, 2004; Aubel et al., 2010; Aubel, 2012). Thus there is growing recognition that family members impact maternal and infant nutrition, and that they should be included in interventions (Aubel, 2012; de Flores, 2010; Furuta & Mori 2008; Ye, Yoshida, & Sakamoto Junichi 2010).

There is also an established relationship between maternal and infant nutrition, socioeconomic status, and the food environment. For example, studies of the three primary aspects of maternal and infant nutrition: namely maternal nutrition, breastfeeding, and complementary feeding (UNICEF, 2009, UNICEF, 2011), show this period to be heavily influenced by socio-economic status. The burden of morbidity and mortality related to malnutrition is borne disproportionately by the poor (Bhandari et al., 2003), and the cost and quality of locally available foods is intertwined with maternal and infant nutrition (Popkin, 2009).

However, little is known about the relationships between migration and maternal and infant nutrition and this is crucial, because of the large number of migrants globally. Therefore Figure 1 illustrates that migration impacts maternal and infant nutrition via the vehicles of changed family and community support, socioeconomic status, and the changing food environment. In the literature review, changing structures of social support in a migrant context will be explored in detail using the theoretical framing of social capital.

In light of limited knowledge of the relationships between migration and health in the context of South-South migration, and given the ways in which migration and maternal and infant nutrition remain unexplored, this study drew on migrant perspectives on maternal and infant nutrition in a Cape Town context (Research Objectives 1-3), and considered ways to improve maternal and infant health in migrant contexts (Research Objective 4).

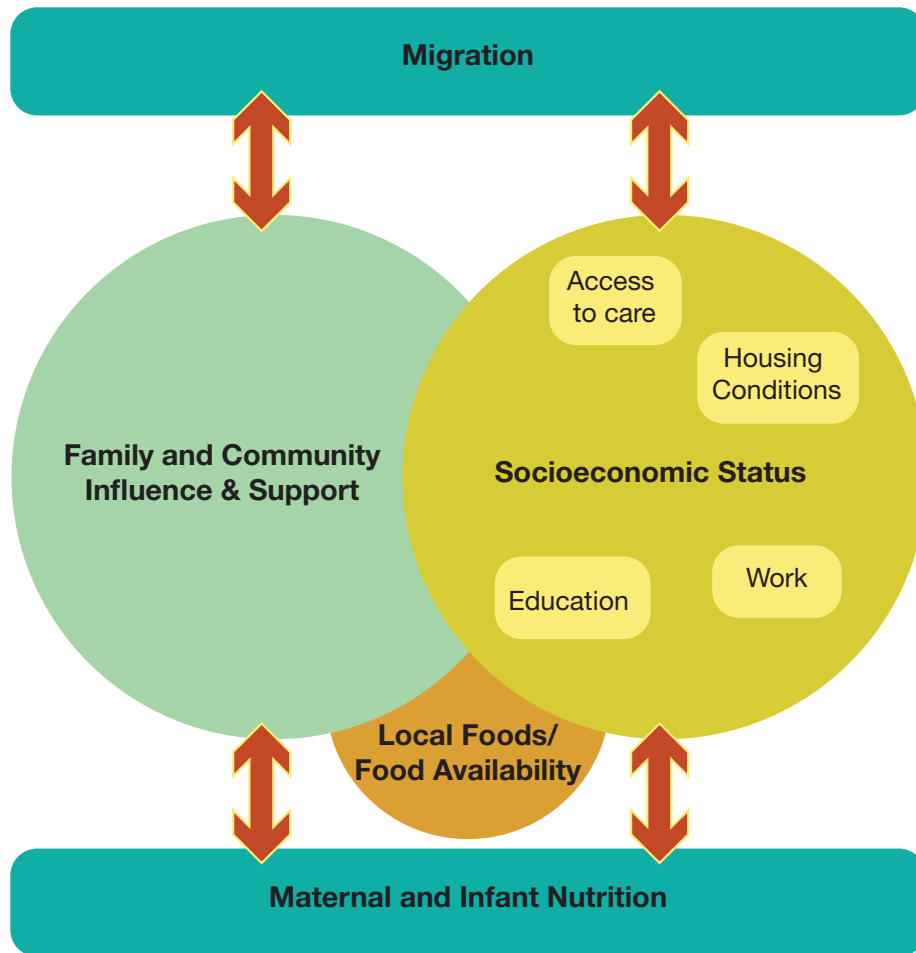


Figure 1: The proposed relationship between migration and maternal and infant nutrition.

Aim

The aim of the study was to understand the ways migrant mothers make decisions for their own nutritional health and that of their infant in the context of migration, particularly in LMIC. In so doing, the study aimed to better understand the potential role of public health policy makers and health care providers in improving maternal and infant nutrition in the context of migration.

Research objectives

1. To contribute to public health understanding of women’s nutrition during pregnancy and the post-partum period, in the context of migration (Research question 1).
2. To contribute to public health understanding of how women understand and make decisions about infant nutrition in the context of migration (Research question 2).
3. To explore migrant social capital related to maternal and child nutrition, with particular focus on household support (Research question 3).

4. To identify potential intervention strategies and further research related to migrant maternal and infant nutrition.

Research questions

The research was guided by the following research questions:

1. How do migrant women understand and make decisions regarding their nutrition during pregnancy and the post-partum period?
2. How do migrant women understand and make decisions on how best to feed their newborn and infant within the context of migration?
3. What are the kinds of emotional and physical supports and sources of information that impact on women's nutritional choices?

Each one of these questions included sub-questions that further explore the research objectives. These sub-questions can be read in Appendix 1.

Overview and structure of thesis

- In Chapter 2: Context-setting: migration and maternal and infant nutrition, I provide a review of the literature relating migration and health, and maternal and infant nutrition, and I consider the ways these fields intersect. This provides the motivation for the methodological approach in this study, described in Chapter 3.
- Chapter 3: Research setting and methodology discusses the Cape Town context, as well as the rationale for the use of two qualitative methods- in-depth interviews and focus groups- employed in the empirical study.

Chapters 4 and 5 explore primarily inductive themes; these were guided first by the descriptions and framing of participants themselves, then linked to relevant literature. Chapter 6 is deductive, or framed by theories of social capital, and looks at the role of social supports and the roles and absences of family.

- In Chapter 4: Maternal nutrition: Food, migration and the nutrition transition, I explore participants' descriptions of foods consumed during pregnancy (Objective 1).
- In Chapter 5: Breastfeeding, formula feeding and complementary feeding in the context of "work", I discuss participants' descriptions of Cape Town as a work environment, and the role of this categorization in framing breastfeeding and formula feeding (Objective 2 and 3).
- In Chapter 6: Sources of support for migrants in Cape Town, I consider the loss of the traditionally important role of grandmothers in re-defining feeding norms (Objective 3).
- In Chapter 7: Discussion and recommendations, I consider the implications (Objective 4) of the study. I relate key findings to specific recommendations that may be appropriate avenues for further study and intervention.
- In Chapter 8: Conclusion, I summarise the study's contributions to understanding migrant maternal and nutrition in the context of urban centres in LMIC.

Chapter 2: Literature review

Introduction

In this chapter, I discuss the links between migration and health in the literature both globally and in South Africa, and frame migration as a social determinant of health, where maternal and infant nutrition provides a specific example of the broader relationships between health and migrants' lived realities in Cape Town. I highlight three main gaps in understanding migration as a social determinant of health that are a focus of this study: Firstly, in the literature relating migration and health, there has been far less attention paid to health in the context of South-South migration, or the relationships between migration and health in LMIC such as South Africa (Sargent & Larchanché, 2011). Secondly, given acute morbidity and mortality in LMIC, there has been insufficient research and interventions focused on the long-term implications of poor maternal and infant nutrition in LMIC, yet such a focus may be very important in understanding migrants' long-term potential. Thirdly, in relation to social capital, while the influence of social capital- specifically household support- on maternal and infant nutrition has been widely asserted (Aubel, 2012), this role had not previously been investigated in the context of migration.

Migration and health

This study is exploratory and descriptive because of the absence of existing literature exploring maternal health or nutrition in this or other South-South migrant contexts. I draw on several different academic disciplines to frame this approach, which reflects the highly interdisciplinary nature of the field of migrant health. As such, I firstly describe the notion of the “immigrant disease carrier” (in reference to migrants), which is rooted in anthropological literature, public health history, and epidemiological literature. Secondly, epidemiological literature has uncovered both resiliencies and vulnerability with respect to migrant health. These studies have highlighted migrants as initially more healthy than native-born populations in HIC (the “healthy immigrant effect”), yet also charted migrants' disproportionate burden of disease, particularly over time in the new country. Approaches to these vulnerabilities can be found in the nursing literature, in interdisciplinary studies of minority health, and in anthropological studies. Strang and Ager (2010) highlighted the challenge and potential of this kind of interdisciplinary approach to migrant health, terming it “mid-level theory” that attempts to bridge some the gaps between explicitly theoretical research (e.g. anthropological) and less theoretical disciplines. Engaging migrant literatures from various disciplines positions this study to have both practical and theoretical relevance.

From “disease carrier” to providing social protection and health equity

Given the large number of people moving globally, healthy migration is an important global priority that is currently receiving more, and different, attention than in the past (Lopez-Acuna, 2013). In particular, in recent history, migrant health policies have been exclusory, with a focus on security and disease control by individual governments. The mythical image of immigrants as “disease carriers”, where they are seen

as carrying the diseases of home to the new country (Kraut, 1995; Vearey et al., 2010a), is accentuated by the stigma associated with certain infectious diseases, such as HIV and TB. It is also affected by the disproportionate burden of infectious disease in low-income countries (Barnett, 2004; Barnett & Walker, 2008; Wang & Wang, 2012). These public policy and medical approaches contribute to the construction of the “immigrant disease carrier” (Sargent & Larchanché, 2011). Taken together, the intersecting anthropological, public policy, and infectious disease literature represents a focus on migrants in relation to the diagnosis and control of infectious disease, as well as to the construction of migrants as somehow different from non-migrants, or “other”.

In South Africa the transmission of HIV in the context of mobility (both cross-border and internal) has been the focus of more studies than any other migrant health topic, and there have been some, albeit limited efforts to control transmission of HIV in migrant populations (Deane et al., 2010; Lurie et al., 2003a; Lurie et al., 2003b). However, given the relative dearth of research on migrant health in South Africa, the focus on HIV infection is sometimes perceived to have come at the expense of consideration of other important migrant health issues (e.g. nutrition, infant health, maternal health) (Vearey, 2010a; Vearey & Nunez, 2010b; Vearey, 2012). Rather than being carriers of HIV, many migrants are moving from areas of lower HIV prevalence- such as the Democratic Republic of Congo (DRC)- to areas of higher prevalence in South Africa (Vearey, 2010a).

The relationship between HIV and mobility has focused particularly on circular migration. That is, on migrants who cycle in and out of South Africa on a fairly regular basis. Yet many migrants, both in South Africa and globally do not travel home frequently. Migrants in Cape Town are much less likely to travel home than cross-border migrants in Johannesburg, or even predominantly Zimbabwean seasonal workers in the winelands outside of Cape Town, because of the distance and cost involved². This may be particularly true of migrant women with children. Despite their limitations, the studies of HIV transmission in the context of migration have helped to frame the goal of migration research in the region: Crush (2005) argued against an over-emphasis on the *routes* of HIV spread, which might lead to the pathologising of vulnerable groups. Rather than focusing on the migrants or movements themselves, he argues for a renewed focus on the reasons that certain population movements cause HIV epidemics (Crush et al., 2005, p.294). Thus rather than focusing on migrants as carriers of HIV, research and intervention should focus on the health vulnerabilities of migrants, and on highlighting the contexts in which migrants shoulder a disproportionate disease burden. For migrants in Cape Town, this context includes socioeconomic conditions including lack of legal status to work, poor housing, unemployment, discrimination, and social isolation.

Departing from this historical focus on migrants as disease carriers, the World Health Assembly in 2013 highlighted the goal of working regionally towards an approach that focuses on health equity and social protection (Lopez-Acuna, 2013). Where migration is a social determinant of health, a focus on healthy equity acknowledges the structural burdens of poverty, including poor nutrition. A focus on social protection acknowledges the acute dangers of violence (before, during, and after travel) as well as the long-term

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2 It should be noted that Zimbabwean migrants speak English and are much more likely than Congolese and Somali migrants to visit home.

impacts of discrimination. Thus as the Global Assembly has rightly noted, health equity lies at the core of any study of migrant health, and contributing to greater health equity for migrants involves illuminating the mechanisms through which migration affects health. The next section discusses the evidence of migrant health vulnerabilities and resiliencies, as well as the gaps in the current understanding of migrant health in the context of LMIC.

Resilience and vulnerability

There are three important strands of literature relating to migrant “resilience” (Rutter, 1987) and “vulnerability” (Chambers, 1989). Migrant “resilience” has been examined in terms of the “healthy immigrant effect”, whereas “vulnerability” has been considered in terms of migrants’ disproportionate burden of disease over time in the new country. The “cultural competency” literature represents one response, including both research and public health intervention, to the disproportionate disease burden amongst migrants.

Resilience: the “healthy immigrant effect”

In stark contrast to the construct of the migrant “disease carrier”, the “healthy immigrant effect”³ has been studied in many countries around the world as an epidemiological phenomenon where foreign-born populations were found to be healthier than the native-born population (McDonald & Kennedy, 2004; Uitenbroek & Verhoeff, 2002). Such findings have been replicated in many western and some non-western settings, and are often understood in terms of self-selection, where healthier people are thought to migrate (Lu, 2008). It is also explained in terms of the extent to which migrants may historically have had a better diet or exercised more in their countries of origin (Akresh, 2007). For example, a population-based study by Malmusi and colleagues (2010) using census data in Catalonia, Spain, found that migration-related health inequalities seemed to be associated with socio-economic status, yet also that foreign immigrants from poor countries had better health relative to their poor socio-economic status. This epidemiological phenomenon has been shown to decline with length of residence in the new country, and over time immigrants’ health resembles that of the local born population.

The insight that healthier people may migrate may offer some helpful insights into the health of migrants in Cape Town. However, this phenomenon only represents a small part of the overall picture of migration and health. Moreover, it may not hold true in the case of migrants who are fleeing circumstances of political violence or economic upheaval. While migration is complex and different kinds of migration yield different health outcomes, the healthy immigrant effect is not the prevailing picture of migrant health in most countries. Rather, the broad relationship between migration and health paints a picture of vulnerability relative to individuals in host countries, as will be discussed in the next section.

Vulnerability: diseases of lifestyle and socioeconomic status

In the long term, there is convincing evidence that immigrants experience “poorer mental and physical

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3 The term “immigrant” and “migrant” can be used somewhat interchangeably in this context, as the difference in definition refers to the perspective of the speaker, rather than to the experience of the person (“immigrant” or “migrant”) who is actually traveling.

health (self-reported and clinically documented) than do non-migrants” (Sargent & Larchanché, 2011). In the long term, the health of migrants normalises to that of native-born population, and in some cases reveals new vulnerabilities, such as higher rates of obesity and associated chronic conditions (Candib, 2007; Fernandez, Miranda & Everett, 2011; Liou & Bauer, 2007; Ujcic-Voortman, Baan, Seidell, & Verhoeff, 2012). While migrants may migrate with certain health-producing behaviours, there is strong evidence that migrants, primarily studied in HIC, ultimately have a variety of poor health outcomes with respect to their native-born counterparts.

In their review of the factors influencing the health of migrants, Lassetter & Callister (2008) presented extensive evidence of the factors influencing the health of migrant populations. Factors that were linked to increased risk of morbidity and mortality included increased length of residence and acculturation, disease exposure prior to migration, lifestyle and living conditions in the new country and experiences of racism. Factors that seemed to promote resilience included lower rates of risky behaviours as compared to the native-born population, the adoption of healthy habits, and the use of ethnically based social support networks in the new country. Notably, the studies focused on “voluntary” migration, and all were based in HIC. In the context of migration to South Africa, it is extremely difficult to differentiate between voluntary and forced migrants. The largest migrant population in South Africa, Zimbabweans, tend to be labelled economic- or voluntary- migrants, yet this label fails to reflect the significant social and political upheaval in Zimbabwe. Thus it might be argued that most migrants in South Africa are here involuntarily; the differences in health between voluntary and forced migrants might include differences in baseline health. As compared to migrants represented by this review, migrants in South Africa are likely to have much less money, poorer housing, and less access to health services than migrants in HIC. It is not clear whether cross-border migrants in South Africa would have higher rates of risky behaviours (e.g. alcohol and tobacco use) or healthy behaviours (e.g. exercise) than South Africa’s native-born population. Nor are the roles of social support networks known in the South African case. While racism is a factor in South Africa, it operates differently than in predominantly white HIC. Rather, a different kind of discrimination, xenophobia, is central to migrants’ experience of life in South Africa. These South African-specific factors point towards a need for focused attention on migration in particular contexts; this South African context for migration will be discussed in detail in a subsequent section.

While the literature seems to indicate specific vulnerabilities in relation to migration, these vulnerabilities are based on contexts that may or may not be transferable. However, evidence of increasing obesity over time for immigrants in HIC may offer important lessons for the South African case, where urban diets may be similarly less healthy than the traditional diets of migrants. For example, long-term Hispanic migrants (≥ 15 years) had a fourfold risk of obesity as compared to short-term migrants (< 5 years), posited to be the result of unhealthy dietary practices and sedentary lifestyles (Kaplan, Huguet, Newsom & McFarland, 2004). Using a nationally representative sample of 13,783 residents in the U.S., Popkin & Udry (1998) found that Asian and Hispanic adolescents born in the U.S. were twice as likely to be obese than first generation residents, also as a result of changes in diet and a more sedentary lifestyle. Migrants in South Africa, who may have experienced food shortages in their lifetimes and are newly food secure, may be particularly

vulnerable to obesity and its associated risk of morbidity, due to the relationships between previous food shortages and obesity (Stowers, 2012).

Response: “culturally competent” health systems

This evidence of poor health outcomes amongst migrants has implicated structural inequity- included key issues such as poverty (Castaneda et al., 2010; Ebrahim, Anderson, Correa-de-Araujo, Posner & Atrash, 2009; Janevic, Sripad, Bradley & Dimitrievska, 2011; Kyriakides & Virdee 2003; Morgan & Hutchinson 2009) and racism (Krieger, 2003), in settings around the world. A parallel literature has evolved which is characterised by a renewed focus on understanding and creating effective health systems for migrants, that is, in uncovering and responding to inequity in specific contexts. This literature offers important insights into migrants’ health experiences in HIC, from the perspective of health care providers. Studies have found that host country health care services are at times not used by migrants because services are not well understood (Davies, Basten & Frattini, 2010), for example, migrants may not be familiar with appointment scheduling, or may not be comfortable speaking English over the phone. In response, there has been a call for increased “cultural competency” for health care providers in countries such as Australia (Stapleton, Murphy, Correa-Velez, Steel & Kildea, 2013), Canada (Jessri, Farmer & Olson, 2012), and the United States (Wissink, Jones-Webb, DuBois, Krinke, & Ibrahim, 2005; Hill, Hunt & Hyrkäs, 2012) to improve migrants’ utilization of the health care system, and their experience of health care more generally.

Cultural competency represents a response to the needs of migrants by focusing on training healthcare providers to become *culturally sensitive*, that is, to have knowledge, awareness and acceptance of migrant cultures. Examples of culturally sensitive medical care range from trying to provide a health care provider of the same gender, to employing bilingual administrative staff to support migrant patients in navigating a clinic. While not all of the migrant health systems literature frames their recommendations in terms of culture, many cite “cultural competency” as an important first step to providing patient-centred care to migrant populations (Correa-Velez & Ryan, 2012; Riggs et al., 2012; Stapleton et al., 2013). A number of studies have focused on the overall health of migrant women during pregnancy, with particular attention to health care access and acceptability. In general, these studies focused on the special needs of migrants, including the need to provide special antenatal and postnatal services to refugee and migrant patients (Correa-Velez and Ryan, 2012; Ergenekon-Ozelci, Elmaci, Ertem & Saka, 2006; Riggs et al., 2012; Stapleton et al., 2013). In a study based in Australia, Riggs (2012) highlights the need for building trust between provider and refugee patients, focusing on a need for flexibility rather than best practice. Medical interpretation and transportation are a consistent issue of concern in HIC, including among migrant women in the United Kingdom and Australia (Riggs et al., 2012; Stapleton et al., 2013). While recommendations that providers become “culturally competent” have some value in designing patient-centred care to migrants, they also have the potential to make migrants seem even more “different”, by focusing on specific populations. While based in HIC, this body of literature applies to the South African context in that such studies of migrants speak to the tensions inherent in considering migration as a social determinant of health, on the one hand, while trying not to pathologize migrants as inherently “different” from non-migrants, on the other.

The studies described above, based in high-income countries, were concerned with migrants' *experience* of pregnancy and birth, and the agenda of reducing inequality. While improving medical experiences may be of relatively lower priority in South Africa and LMIC more generally due to this relative lack of resources, this literature still offers important insights into migrant health in South Africa. For example, it illustrates the potential challenges of, and responses to, communicating across language, class, and differences in previous experience of medical care.

Of the studies focused on migrant maternal health, studies of Somali maternal health form their own sub-literature. Such a literature does not exist for Congolese and Zimbabwean migrants, the two populations that are also included in this study. While Congolese and Zimbabwean migrants have also travelled to many parts of the world, they are present in much smaller numbers in HIC and in general, do not have the formal refugee status that has driven resources towards research on Somali refugee health. Somali resettlement from refugee camps to many parts of North America and Europe in the context of a long civil war, as well as Somalis' cultural distinctiveness, has given rise to a significant health literature. While not focused on Somalis in South Africa or other LMIC, this literature is illustrative of the contributions of studies that focus on the needs of specific populations.

This Somali-specific literature focuses on issues of access to care, doctor-patient communication, and specific health care needs such as trauma. Specifically addressed are a range of maternal health topics, including beliefs around pregnancy and childbirth, the value and relevance of prenatal care, breastfeeding, navigation of health systems, and fears of caesarean section (Ameresekere et al., 2011; Carroll et al., 2007a; Carroll et al., 2007b; DeStephano, Flynn & Brost, 2010; Brown, Carroll, Fogarty & Holt, 2010; Straus, McEwen & Hussein, 2009; Wissink et al., 2005; Gurnah, Khoshnood, Bradley & Yuan, 2011; Small et al., 2008). For example, two qualitative studies of Somali women highlighted that women feared that a caesarean section would result in death (Ameresekere et al., 2011; Brown et al., 2010). Carroll's (2007b) qualitative study of 45 Somali women in New York State highlighted the need for professional interpretation, as well as the need for gender concordance in medical appointments. Female genital cutting (FGC, also known as female circumcision and female genital mutilation), widely practiced in Somalia for many years, has also received a wave of attention in the past fifteen years (Vangen, Johansen, Sundby, Træen, & Stray-Pedersen, 2004; Ameresekere et al., 2011; Campbell, 2004; Essén, Sjöberg, Gudmundsson, Östergren & Lindqvist, 2005; Gele, Johansen, & Sundby, 2012a; Gele, Johansen, & Sundby, 2012b; Khaja, Lay & Boys, 2010). This focus on circumcision was important for non-Somali obstetrician/gynaecologists who needed specific skills and empathy to understand and respond to circumcised migrant patients, but the proliferation of research on the topic also led to exoticization and demonization of cultures that practiced female circumcision. Despite this robust literature, issues related to maternal and infant nutrition have not yet received much attention in this literature.

Viewed as a cohesive body of literature, these studies highlight disconnects between the beliefs and practices of Somali women from their country of origin and those of their new- Western- host country. They also highlight and contest the pervasive image of Somali women as high-needs, particular, or even difficult to treat. As illustrated by this literature, rather than facilitating health equality, an emphasis on culture

can lead to “further pathologising of ethnic minority communities and misplacing the focus on the reasons for these inequalities” (Griffith, 2010). DeSouza (2013) frames nurses’ descriptions of migrant women in New Zealand within a Foucauldian discourse around power, showing how migrants are problematized in Western medical contexts. She writes that the “[u]se of ‘culturalist’ and ‘racialising’ discourses, which justify ethnocentric care provision based on stereotypes, which in turn contribute to health disparities” (ibid, p.295). In terms of contextualizing migrant maternal health and infant nutrition as a determinant of health, I propose that focusing on several migrant populations- rather than a specific migrant group- may be one way of understanding health vulnerabilities outside of “culture,” in terms of broader contexts.

Migration and health in South Africa

Background

The first part of Chapter 2 summarised the clinical and epidemiological literature that is focused on understanding and responding to health inequities in migrant populations. Given that the South African health system struggles to provide adequate primary health care to South Africans, this discussion of health equity for migrants is new to South Africa and most other LMIC. Therefore it is important to first briefly outline the history of migration to South Africa, xenophobia, and more recently, the language of human rights used in advocating for migrants’ right to basic health care services in South Africa (Vearey, 2011a). While migrant maternal and infant nutrition is not wholly dependent on access to health care services, migrants’ health care experiences help to contextualise migrants’ overall perspective of being integrated into, or alienated from, South African society and South African health resources. It is in this context that maternal and infant nutrition should be prioritised.

The language of social protection and health access for migrants is relatively new to South Africa. Due to stringent restrictions on migration (Aliens Control Act No. 40 of 1973) under Apartheid South Africa, black Africans were only allowed to enter the country as migrant labourers until 1994 (Christie, 1997), and the public health issues germane to migrant health under Apartheid South Africa most resembled issues related to temporary labour migration in other parts of the world. These included increased susceptibility to sexually transmitted diseases (Crush et al., 2005), as well work injuries and illness, particularly in mines (Coovadia, Jewkes, Barron, Sanders, & McIntyre, 2009; Murray, Kielkowski & Reid, 1996). However, with the end of Apartheid, restrictions on movement into South Africa were loosened, and a new migratory pattern began to evolve (Aliens Control Act No. 96 of 1991, amended 1993; Crush, 1999). Post-Apartheid South Africa became a favourable destination for nationals of other African countries, and migrants with a broad range of backgrounds were allowed entry into South Africa (Khan, 2007). Today, at least 1.6-2 million migrants reside in South Africa (Consortium for Refugees and Migrants in South Africa, 2009). These migrants include refugees, asylum seekers, those on visas, and undocumented or “irregular” migrants. These migrants must be integrated into the South African health system.

While migration in South Africa has historically been disproportionately male due to migration to the mines, migrants in cities are much more evenly divided between men and women (Vearey et al., 2011b). Women migrate towards towns and cities where informal sector trade provides a better source of livelihood

for women migrants, which may in turn improve household food security (Vearey et al., 2011b). Women are also more likely to be legal immigrants—through refugee or another formal status such as asylum seeker status or, in the Zimbabwean case, work visas (Vearey et al., 2011b). Formal status is integral to livelihood in South Africa, which impacts on health both directly (e.g. fearful of seeking care) and indirectly (e.g. being unable to find housing). With the growth in the total number of urban migrants in South Africa and other SADC urban centres and the relative lack of research documenting migrants' health, there is a pressing need to understand more about the health and well-being of the urban migrant population, and particularly, the health experiences of women migrants.

While not downplaying the serious health issues faced in rural areas, issues of cross-border migration to South Africa are intertwined with broader issues of internal migration and health in African urban centres. According to UN- (2010), 62%, of urbanites in sub-Saharan Africa, or 200 million people live in slums. While in South Africa, the proportion of urban residents in “slums” has fallen significantly since the end of the apartheid, about 29% of the urban population still live in “slums” (UN-Habitat, 2010), where “slums” are categorized in terms of “deprivations” including overcrowding, lack of protection against weather, access to water and sanitation, and protection against eviction (UN-Habitat, 2010). In South Africa, this definition would include, but not be limited to, informal settlements and townships. Recent studies of migration in South Africa highlight the urgent need to focus on health in urban areas of the SADC region because of the health implications of lack of amenities and overcrowding (Vearey, 2011c; Vearey, 2012). Thus while there is a myth that urbanites, regardless of migrant status, are healthier than their rural counterparts, this does not bear up in many African cities and South Africa is no exception (Kimani-Murage et al., 2011). For example, Kimani-Murage (2011) cites the African Population and Health Research Centre's finding that children living in slums in Kenya are sicker and have higher mortality than any other sub-group in Kenya. Rather than becoming healthier in an urban context, urban African cities are chronically unhealthy places for the poor, which often includes migrants. Slum overcrowding is associated with the rapid spread of infectious disease, including upper respiratory tract infections, TB, and diarrhoeal disease (Unger & Riley, 2007). In the Cape Town context, issues of overcrowding, poor sanitation, and lack of protection against eviction all have important implications for the health of both migrants and non-migrants. However, the relationships between poor urban living conditions on nutrition, and particularly for migrant maternal and infant nutrition, are not well understood.

A human rights approach to access to health care

Migrants' need for healthy environments, and the health challenges presented by urban poverty, is coupled with a need for health care access. Improving maternal and infant nutrition involves both engaging in broader health contexts (that is, access to specific foods) as well as examining health care access. In South Africa, the challenges cross-border migrants face in accessing public-health services across South Africa is well documented, ranging from outright denial of care by hospitals, to perceived stigma and language barriers driving this exclusion (Human Rights Watch (HRW), 2009; HRW, 2011; Vearey, 2011a). Migrants who feel marginalized by the health care system may be unlikely to internalize health messaging by that

system. These challenges are not unique to South Africa or even to LMIC; in the European Union (EU) migrants have similar experiences of denial of care (Thomas & Gideon, 2013), and access to care remains a concern in settings around the world (Davies et al., 2010). Given the capacity challenges of the South African health system, maternal and infant nutrition may be seen as a “minor” issue and not receive attention.

While the South African constitution (The Republic of South Africa, 1996) and the South African Refugees Act (The Republic of South Africa, 1998) both present an ambitious standard for recognising human rights and the dignity of all migrant groups, including the right to basic health care (Article 27 (1) (a)), there is great variability in the government’s ability to enact these standards. Despite theoretically strong protective legislation, migrants in South Africa are marginalized and subject to discrimination (Misago, Monson, Polzer & Landau, 2010; Gastrow, 2013). Widespread and well-organized attacks on foreigners across South Africa in 2008 illustrated the extent to which non-South Africans are forced to the margins of South African society (Misago et al., 2010), and the extent to which basic health care may become secondary to survival. Despite evidence that urban migrants actually contribute to the economies of their new cities (E. Campbell, 2006; C. Campbell, 2011; Grabska, 2006), cross-border migrants in South Africa continue to be portrayed as “disease carriers” and viewed as placing a burden upon the public-health system (Vearey & Nunez, 2010b). This tension between the broadly inclusive goals of the South African constitution on the one hand, and strained public services, widespread poverty, and xenophobia, on the other, are central to migrants’ experience of life in Cape Town. Given this pervasive discrimination, while migrants may be able to access health care in theory, discrimination compromises both the quality of care migrants receive and their willingness to seek out that care. Maternal and infant nutrition is unlikely to assume a high priority in the context of pervasive and acute challenges to survival.

The South African migrant health literature that uses a human rights framing makes the strong argument that it is not only constitutional, but also “in a countries enlightened self-interest” to establish health care provision as a basic standard for migrants (Sargent & Larchanché, 2011, p.355). This human rights approach to health (Mann, 1994) asks first about what *should* be available for all, based on standards of common dignity established by international law (United Nations, 1948) and ratified by individual governments, including the South African government. Indeed, denial of care translates into the inability to access appropriate and timely care, which in turn may place the host population- South Africans- at risk (Davies et al., 2010). Access to maternal and infant health care is enshrined in a human rights approach to health care.

However, this human rights approach offers a minimum standard rather than a roadmap to improving migrant health. Given pervasive xenophobia in South Africa, an appeal to universal human rights has been an important justification for advocating migrants’ right to basic health services at all levels. Moreover, it provides a minimum standard for the recognition of human dignity- including the right to access basic services and freedom from persecution. While the prevailing South African literature on discrimination in health care settings makes a strong case for continued advocacy (Vearey & Nunez, 2010b; Vearey & Nunez, 2011a), there are very few studies that explore the daily lives of migrants in South Africa in reference to specific health experiences. As such, this study forms part of the effort to understand the ways that health

access, health behaviours, and one's daily life as a migrant, intersect in South Africa and other LMIC.

Working towards a more inclusive public health system also means grappling with the colonial, paternalistic roots of most health systems that serve the poor (Farmer, Kleinman, Kim & Basilio, 2013), as was discussed in the case of the cultural competency literature set in HIC. If, as is usually the case in public health research, a topic begins by identifying a problem, the population of interest is often simultaneously problematized. In this study, it was therefore important to identify a health topic that challenges the ways that migrants tend to be represented in the literature; to challenge migrants' representation as passive objects. Maternal and infant nutrition provides one potential avenue for doing this.

In the previous sections, the links between migration and health have been broadly categorised as *vulnerabilities* and *resiliencies* related to various stages of migration, to *who* migrates, *when*, *where to*, and *why* (Vearey & Nunez, 2010b; Vearey, 2012). Many links are unique to specific kinds of migration, to specific places, in specific contexts. In their seminal study of HIV and mobility in South Africa, Crush and colleagues (2005) argued for the need to understand “migrants *as migrants* (and those with whom they interact) and hence the economic, social, sexual and gender regimes associated with migrancy in its many different manifestations” (p. 294, emphasis in original). This consideration of the broad underpinnings of migration informs the approach of this study of maternal and infant nutrition, as illustrated in Figure 1 (Chapter 1). Social capital, explored in the next section, provides a helpful theoretical frame through which to understand this specific area of migrant health. This framing advances the broader discussion of the potential role of the South African health system in migrant maternal and infant nutrition.

Social capital and migrant health

One of the ways that migration affects health may be via changes in social support. The concept of “social capital”- broadly defined as the “value” of social networks- builds on ecological perspectives of health in context (Bronfenbrenner, 1979). Concepts of social support and social capital are of widespread interest in public health, particularly in HIC (Campbell, 2011; Lomas, 1998). The concept is complex, with many dimensions. Despite this complexity, the basic premise revolves around the ways that health is shaped by social support and social networks. This is particularly true in the case of migration, where social support has changed significantly after leaving the home country.

Two categorizations of social capital provided potentially helpful terminology for conceptualising the ways that social support has changed in the context of migration: One definition of social capital refers to the dynamics of internal linkages between people within community and to the resources and norms that arise from (bonding) and between (bridging) social networks (Helliwell & Putnam, 2004). While fluid and subject to interpretation, for migrants in Cape Town these might include members of the same migrant group. Secondly, studies of social capital also typically distinguish between what people do (i.e. membership in groups) and how people feel (e.g. social trust, caring). For migrants in this study, what people “did” related to day-to-day feeding, and could be juxtaposed with how migrants felt (i.e., migrants' feelings of isolation, fear of xenophobia, or sense of community). Social support, defined as the support one receives from others, is a useful term for understanding what people do for others. Within the category of the things people *do*,

according to House (1981), social support can be subcategorized into several kinds of supportive behaviours, including:

1. *Emotional support*- empathy, love, trust and caring.
2. *Instrumental support* that directly supports the person in need.
3. *Informational support* or the provision of advice or information that provides someone with the tools to address problems.
4. *Appraisal support*, which involves the provision of information that is useful for self-evaluation purposes, particularly constructive feedback and affirmation (House, 1981).

These subcategories represent possible mechanisms by which social support can affect health. They are particularly important in the migrant context because all four subcategories are likely to have changed in the context of migration. For example, it is likely that a migrant may draw on different sources of each kind of support, or that these various sources of support are absent after migration to a new country.

These changes of support have important implications for migrant health generally, and for maternal and infant nutrition specifically. The specific relationships between social capital, and maternal and infant nutrition will be discussed later in the context of the maternal and infant nutrition literature. Past research into social capital and health offers specific insights into this study's context. For example, one's *perception* of support- rather than objective measures- is most strongly linked to recipients' health and well-being (Wethington & Kessler 1986). In fact, the relationship between objective and subjective measures is modest (Glanz, Vimer & Viswanath, 2008, p.198). In this light, women's *descriptions*- self-perception- of support offers insight into their health. The primacy of perceived support validates this study's use of migrants' own descriptions of social connectedness.

Moreover, there is evidence to suggest that social support is gendered: women are more likely than men to be both the providers and the recipients of social support (Shumaker & Hill 1991). Indeed, women's experience of migration to South Africa is different from men's, both because of their experiences in their home countries, and in the ways that gender continues to shape the kinds of work they do in South Africa. Moreover, individuals need different kinds of support at different times of life (Kahn & Antonucci, 1980). For example, in times of acute need- in the context of migrant maternal health, perhaps after miscarriage or stillbirth or other health crises- individuals may benefit the most from a dense and closely-knit network. That is, as per Maslow's Hierarchy of Needs (Koltko-Rivera, 2006), different types of support may be required depending on the needs of an individual that have already been met. In the context of other maternal needs- such as finding a good health care provider or making health decisions- an individual may benefit more from a diffuse network that offers more general social support. Social capital provides a vocabulary for understanding the typical kinds of supports needed for health, and highlights the strengths and weaknesses of these supports for migrants in Cape Town. While rooted in notions of social capital, the term "social support" is used more extensively in the findings of this dissertation, as it speaks to the specific (rather than abstract) mechanisms of help provided by social and institutional relationships. This term is used throughout the literature relating infant nutrition to the support of grandmothers, or elder women (Aubel, 2012; Bezner Kerr, Dakishoni, Shumba, Msachi & Chirwa, 2008).

Maternal and infant nutrition

Background

Maternal and infant health is central to the goal, presented in the World Health Assembly, of promoting social protection and health equity for migrants (Lopez-Acuna, 2013). We know little about the experiences of migrants in LMIC in relation to both nutrition and health. As such, in this study I chose to focus on both maternal and infant nutrition in order to uncover and better articulate the ways the two are intertwined. Maternal and infant nutrition includes three broad areas: maternal nutrition, breastfeeding, and complementary feeding. Beyond the implications for the growing foetus, maternal nutrition offers a window on long-term family nutrition in a migrant context. Breastfeeding and complementary feeding are two overlapping areas of study, which impact heavily on both the long and short-term health of infants. In this study, understanding participants' priorities for maternal and infant feeding involves juxtaposing migrants' perspectives against the global, national, and local context of maternal and infant health generally, and maternal and infant nutrition specifically.

Global maternal and infant mortality

Improving maternal and infant health is high on the global health agenda as evidenced by the Millennium Development Goals.⁴ Approximately seven million children under age five die every year, with the leading causes of death including pneumonia, preterm birth complications, birth asphyxia, diarrhoea, and malaria (Silal et al., 2012). An estimated 45% of these deaths are related to malnutrition, and breastfeeding has been named “the most important preventive approach for saving child lives,” with the potential to prevent 13% of all under-five deaths in developing contexts (Bhandari et al., 2003, p.6).

Globally in 2010, 287 000 women died during pregnancy and childbirth (World Health Organization 2012), and an estimated four million newborns die every year (Silal et al., 2012) Maternal mortality is extremely difficult to measure, but seems to be declining substantially (Hogan et al., 2010). While there is a decline in maternal mortality, poor nutrition during pregnancy is not only an issue of life and death. Growing evidence suggests that improving maternal health not only impacts the short-term morbidity and mortality of mothers and infants, it can actually lower rates of chronic disease in later generations (Kapur, 2011; Painter et al., 2008).

There is also widespread recognition of the complexity of addressing high rates of maternal and infant morbidity and mortality. In the Post-2015 (post-MDG) Framework, there is a call to prioritise the social determinants of health, as well as to give more explicit attention to the challenges of global nutrition (Alleyne et al., 2013). As such, this study explores the interactions between maternal and infant nutrition, and migrants' lived experiences in Cape Town. These interactions offer insights into migration as a social determinant of health.

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4 Specifically, Millennium Development Goal 4: Reduce child mortality “Target 4 A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate” Millennium Development Goal 5: Improve maternal health by 2015 Target 5 A: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio (United Nations, 2011).

Maternal and infant mortality: South African context

Migrants' maternal and infant nutrition in Cape Town is set against the backdrop of the South African health system. South Africa is one of the few African countries where maternity care is free, with sliding scale fees based on income. Most (92%) South African women attend some antenatal care and almost 87% deliver in health facilities (HRW, 2011). Yet despite global reductions in mortality, South Africa has not reduced its maternal mortality in the last decade. HRW reports that South Africa's maternal mortality ratio (MMR) has more than quadrupled in the last decade according to government data, predominately as a result of the HIV epidemic (2011). However, this increase also speaks to systemic problems within the government health system (from 150 to 635 deaths per 100,000 live births between 1998 and 2007) (2011). The most recent UN data on maternal mortality in South Africa estimated 410 per 100,000 live births (United Nations Statistics Division, 2012). The most recent report on maternal deaths reports in South Africa that between 2005 and 2007, 1,519, (38.4%) of reported maternal deaths were classified as "clearly avoidable" (National Committee on Confidential Enquiries into Maternal Deaths, 2007). These included unsafe abortions, no or late entry into antenatal care, lack of blood for transfusion, problems finding transport to health institution, and lack of appropriately trained staff (ibid.). South African women still face "considerable access barriers" related to antenatal care and having a skilled attendant at delivery (Silal et al., 2012, p.15). These issues provide context for understanding migrants' experiences in the South African health care system. The role of nutrition in these rates will be discussed in the next section.

Rates of infant mortality for South Africa are 46 per 1000 live births, with under-five mortality at 64 per 1000 live births (United Nations Statistics Division, 2012). This rate is low relative to other African countries, but high relative to most HIC. In Cape Town, rates of infant mortality have remained constant over the past decade, at between 22 and 25 per 1000 live births, with a significantly higher than average rate in certain sub-districts of the city (Groenewald et al., 2008). Maternal mortality in Cape Town is very low, relative to the national data, at six per 100 000 (Massyn et al., 2013). As such, while the studies and interventions in many African countries continue to revolve around mortality, relatively low rates of maternal and infant mortality in at least some parts of South Africa implies that this conversation should shift to better encompass the overall, long-term well-being of residents, including that of migrants.

The health impacts of maternal and infant malnutrition

Low rates of infant mortality in urban centres like Cape Town, described above, are juxtaposed with a growing recognition of the long-term developmental consequences of poor nutrition during gestation and the first 24 months of life. Black et al. (2013) described the consequences of maternal and child undernutrition and overweight globally as far-reaching, impacting both acute and chronic disease, healthy development and economic productivity. The authors present that malnutrition is implicated in 3.1 million deaths, or 45% of the 6.9 million global child deaths in 2011 (Black et al., 2013). Challenges in measuring the role of maternal malnutrition in maternal morbidity and mortality notwithstanding, an earlier review of maternal death suggested that iron-deficiency anaemia was the cause of at least 20% of maternal mortality, which translates into about 57 000 deaths per year. Thus maternal and infant nutrition is a matter of grave

consequence globally, particularly in LMIC (Black et al., 2008).

While nutrition had a “negligible presence” in the MDGs (Gillespie, Haddad, Mannar, Menon & Nisbett, 2013), today there is an acknowledgement of this gap as well as growing attention to the first 1000 days of life- from conception to a child’s second birthday, where nutrition plays a central role (Black et al., 2013). This new focus was recently discussed in a full issue of *The Lancet* in 2013. This attention to the first 1000 days mirrors the maternal and infant health period that is the focus of this study, and is seen as a “window for improving long-term health” (Kapur, 2011).

Maternal nutrition in South Africa

The South African context for migrant maternal nutrition in Cape Town is not well understood. In one of the rare studies focused on maternal nutrition in South Africa, Kruger (2005a) highlights the challenges of understanding maternal nutrition in many developing country settings because of the scarcity of pregnancy weight gain patterns. That is, in South Africa, pre-pregnancy weight and Body Mass Index (BMI) is seldom available, and gestational age is often uncertain. Despite this, Kruger (2005a) argues that health care providers should monitor gestational weight gain and that procedures for measuring weight should be standardised, in order to improve maternal and infant outcomes.

Nutrition policy in South Africa remains broadly focused on undernutrition. Given that South Africa is one of the twenty countries worldwide with the highest burden of undernutrition (Bryce et al., 2008), it is understandable that the integrated national policy for nutrition is focused particularly on undernutrition (Department of Health, 2013; Western Cape Government, 2013). However, obesity and associated non-communicable diseases are prevalent among all population groups in South Africa (Kruger, Puoane, Senekal & Van Der Merwe, 2005b; Van Der Merwe & Pepper, 2006). For example, in South Africa 56.6% of women older than 15 years of age are overweight or obese. Maternal malnutrition therefore spans the gamut of overall overnutrition, overnutrition with micronutrient deficiencies, as well as undernutrition (Kruger et al., 2005b). Migrants in Cape Town enter into this broader national context in which South Africans face both overnutrition and undernutrition.

Breastfeeding and complementary feeding globally

Based on evidence of morbidity and mortality globally and in South Africa, there is clear indication of the importance of maternal and infant nutrition in influencing both short-term (acute infection) and long-term health (neurodevelopment). Moreover, there is evidence that, at a population level, South Africa faces the simultaneous challenges of undernutrition and overnutrition. What is less well understood is the ways in which these challenges translate to specific populations, such as urban migrants. To set the stage for this investigation, this section discusses the rationale and evidence for the WHO recommendations for infant nutrition. These include guidelines for both breastfeeding and complementary feeding.⁵ A subsequent section will examine the studies applicable to breastfeeding and complementary feeding in migrant contexts

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5 Complementary feeding is defined as the timely introduction of safe and nutritionally rich food in addition to breastfeeding at about six months of age and typically provided from six-23 months.

as well as in a South African context, respectively.

Breastfeeding

Suboptimum breastfeeding is believed to result in more than 800 000 child deaths annually (Bhutta et al., 2013; Black et al., 2013), or about 11.6% of all global child deaths. Data on nutrition-related morbidity and neurodevelopment are scarce, but in one review of stunting and poverty in relation to success in primary school globally, it was estimated that 200 million children globally do not meet their “developmental potential” due to stunting (Grantham-McGregor et al., 2007). Breastfeeding rates globally vary. According to Black and colleagues (2013), “about half of children younger than one month, and three in every ten children aged one-five months are exclusively breastfed” (p.441). For migrants in Cape Town, it was not clear before conducting this study whether migrant women were primarily concerned with child “survival” or their children’s “developmental potential”, or both. Previous to this study, it was also unclear whether migrant women were likely to perceive breastfeeding as practical or beneficial to their child’s short-term or long-term health.

WHO breastfeeding recommendations include commencement of breastfeeding within one hour of birth, exclusive breastfeeding until six months, and continued breastfeeding until two years of age or older (Bhutta et al., 2013). The American Academy of Pediatrics most recent breastfeeding policy statement highlights the protective effect of breastfeeding for the infant, against infectious diseases, as well as future diabetes mellitus, certain types of cancer, obesity, hypercholesterolemia, and asthma (Gartner et al., 2005). It also highlights benefits to the mother, including a decreased risk of cancer, decreased weight, and increased bone density. The article highlights that these benefits translate into lowered health care costs, decreased costs for public benefit programs, and decreased parental employee absenteeism (Gartner et al., 2005). While there has been some discussion of whether foods should be introduced before six months, a 2004 Cochrane review found that infants who were exclusively breastfed for six months *did* experience less morbidity, and that there was no evidence that exclusive breastfeeding for six months heightened risk of growth deficits in developed or developing countries (Kramer & Kakuma, 2004). There is therefore strong evidence to suggest that, all other things being equal, exclusive breastfeeding until six months, and continued breastfeeding until two years or beyond, presents significant benefits to both a mother and child.

However, even in countries like the United States, where significant resources and attention is given to breastfeeding promotion, breastfeeding recommendations and advice are not an exact science (Shealy, Scanlon, Labiner-Wolfe, Fein, & Grummer-Strawn, 2008). Rather, “the physiology of human lactation is extremely complex, but effective lactation is not determined by the frequency, duration, intervals, and pairing of feedings” (Shealy et al., 2008, p.554). While the WHO officially recommends exclusive breastfeeding for six months, it is not uncommon for WHO documents- such as Community Health Worker training guides- to recommend the addition of solid food anywhere between four and six months (WHO, 2002). Shealy and colleagues (2008) recommended that, for health professionals to understand how to better support breastfeeding mothers, more research is needed around how breastfeeding advice is received. In the context of LMIC, even less is known about how women receive advice, nor who is giving advice. Recommendations

are often distilled into several simple messages around exclusive breastfeeding for the first four-six months of life. The extent to which migrant women understand, embrace or resist these messages has wide-ranging implications for maternal and infant health.

In addition to improving child survival, there is strong evidence that breastfeeding reduces rates of obesity later in life (Ahluwalia, Morrow, D'Angelo & Li, 2012; Black et al., 2013). It is notable that poor nutrition during pregnancy raises an infants' long-term risk for obesity, as does lack of breastfeeding (Ahluwalia et al., 2012; Black et al., 2013). In turn, obesity is one of the major risk factors for many non-communicable diseases. In this light, obesity risk may be compounded for migrant children if mothers are malnourished during pregnancy then do not breastfeed.

Complementary Feeding

Complementary feeding refers to the transition from exclusive breastfeeding to family foods, usually between four to six and 18-24 months of age. The adequacy of complementary feeding is framed in programming literature in terms of timely, adequate, safe and appropriate feeding. In low income settings, and estimated two out of five children under five years of age are stunted (WHO, 2013). After age two, it is very difficult to reverse the effects of stunting (Reyes et al., 2004).

The period from six months to 23 months is recognized as an extremely important period for infant nutrition (Dewey & Adu-Afarwuah, 2008). Between the ages of six and 12 months, diarrheal illnesses peak and growth can slow as foods of low nutrient density replace breast milk (Dewey & Adu-Afarwuah, 2008). Recommendations for the timely introduction of complementary foods are by necessity somewhat less prescriptive to make allowances for differences in the kinds of foods available in different parts of the world. The core WHO indicators include the timely introduction of solid, semi-solid, or soft foods⁶, minimum dietary diversity⁷, minimum meal frequency⁸, and a minimal acceptable diet⁹ (WHO, 2010b). These broad recommendations are targeted at reducing child and infant mortality, but also at reducing rates of underweight and stunting. Interestingly, while overweight is mentioned in the WHO recommendations, the indicators are still generally framed in terms of "minimums"- thus in terms of risk of undernutrition- rather than encompassing the growing challenge of childhood overweight. That said, recommendations on weight gain encompass both risk of adult obesity as well as risk of stunting (Dewey & Adu-Afarwuah, 2008). In addition to these recommendations, iron supplementation to children under aged two has been demonstrated to reduce a child's risk of anaemia by 49% and iron deficiency by 76% (Bhutta et al., 2013). Bhutta and colleagues (2013) argue that while the "theoretical benefits" of strategies and recommendations are clear, these benefits are difficult to enact with clear, effective policies in resource-poor countries. Given the relative complexity of complementary feeding recommendations, it may be difficult to apply feeding

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6 "Timely" is defined by the WHO as between six and eight months of age.

7 Defined as the proportion of children six-23 months of age who receive foods from four or more food groups- a "proxy for adequate micronutrient-density of foods."

8 This measure depends on the age of the child, and includes

9 Minimum dietary diversity and minimum meal frequency.

guidelines with young migrant mothers in Cape Town, or how these guidelines would intersect with feeding norms brought from their countries of origins.

As such, it is important to explore the context, understanding and values that migrant women in Cape Town apply to complementary feeding. Indeed, the same complementary feeding interventions have resulted in different results in different communities (Dewey & Adu-Afarwuah, 2008). For example, interventions involving the provision of complementary food had a positive impact in Ghana and Malawi but no impact in South Africa, Indonesia or Brazil (Dewey & Adu-Afarwuah, 2008). It is not immediately clear how and if migrants would be included in such interventions, and the study does not note heterogeneity within the samples of each intervention country. It is of note that in the meta-analysis only a few studies included data on morbidity, behavioural development or micronutrient levels- they primarily measured height and weight. Of these, the provision of fortified food did not impact behavioural development in South Africa (Dewey & Adu-Afarwuah, 2008). In their conclusions, Dewey & Adu-Afarwuah (2008) emphasized that there was no one-size-fits-all approach to interventions in complementary feeding. Rather, the success of interventions was dependent on the baseline nutritional status of the community. Moreover, they emphasize that complementary feeding interventions cannot alter the factors underlying child malnutrition, such as poverty and poor sanitation. Rather, for interventions to be effective, they must be part of a broader effort to improve socio-economic status and the provision of social services (Dewey & Adu-Afarwuah, 2008, p.33). Therefore complementary feeding interventions require a baseline understanding of the needs, beliefs, and realities of the families they serve.

Breastfeeding and complementary feeding in South Africa

While little is known about breastfeeding and complementary feeding amongst migrants in South Africa or other LMIC, the nutritional data from other African countries, including migrant-sending countries, offers some insights into feeding patterns that may apply to migrants in Cape Town pre-migration. Breastfeeding rates amongst South Africans also provide context. Breastfeeding in six-23 months old infants is most frequent in Africa (mean 77%) as compared to other world regions (Black et al., 2013). However, in a review of breastfeeding practices in a handful of African countries, while most women breastfeed, many beyond two years, they seldom exclusively breastfed (Bassett, 2000). Rather, food and water was commonly introduced early in an infant's life. While the early introduction of complementary foods has often been framed as a "cultural" norm, or an "African" phenomenon, the early introduction of solids has been documented in studies of families in both HIC and LMIC (Grummer-Strawn, Scanlon & Fein, 2008; Grassley & Eschiti, 2008; Crocetti, Dudas & Krugman, 2004; Fielden & Gallagher, 2008). According to Bassett- writing over a decade ago- formula was at the time uncommon in most parts of Africa (Bassett, 2000). This may have changed, particularly in urban centres across the continent. The overall rate of exclusive breastfeeding in Africa, based on estimate, is around 25% (Kimani-Murage et al., 2011). Table 1 shows that for countries of origin of two of the populations sampled in this study, rates of breastfeeding initiation were high (98%), whereas rates of exclusive breastfeeding were much lower (36% for DRC and 22% for Zimbabwe), with very low rates of minimum acceptable diets for breastfed children between 6 and 23 months of age (4% for DRC

and 11% for Zimbabwe). For migrants in Cape Town originating in Zimbabwe or Congo, it is not clear the extent to which migrants' feeding of their infants changed with their move to South Africa.

Given that migrants in Cape Town have some level of contact with South Africans, including South African health care providers, rates of breastfeeding in South Africa are instructive to understanding the migrant context. Rates of exclusive breastfeeding in South Africa are extremely low, estimated at between 7% (Meyer, van der Spuy & du Plessis, 2007) and 10% (Chopra, Daviaud, Pattinson, Fonn & Lawn, 2009). Existing South African literature tends to focus on the infant nutrition as related to HIV/AIDS- that is, in relation to reducing rates of mother-child transmission of HIV and to improving the health of HIV-positive infants (Nor 2011; Becquet et al., 2009; Bland, Rollins, Coutsoydis & Coovadia, 2002; Saloojee, 2008; Kindra, Coutsoydis, Esposito & Esterhuizen, 2012). To date there are very few South Africa- based studies focusing on breastfeeding in predominantly HIV negative sample (Doherty et al., 2012; Sibeko, Dhansay, Charlton, Johns & Gray-Donald, 2005). These studies of breastfeeding are needed to inform infant nutrition policy and intervention. Qualitative studies that focused on the perspectives of South African lactating mothers highlighted very low rates of exclusive breastfeeding (Bland et al., 2002; Nor, et al., 2011; Sibeko et al., 2005), lack of understanding of what 'exclusive breastfeeding' means (Nor et al., 2011), the common use of traditional herbal preparations in the first months of life (muthi) (Sibeko et al., 2005), the perception of breast milk inadequacy (Bland et al., 2002; Sibeko et al., 2005), and the early introduction of complementary foods (Nor et al., 2012; Sibeko et al., 2005). One study that sampled 999 women in KwaZulu Natal and the Western Cape revealed that at 12 weeks post-partum, 20% of HIV-negative women had stopped all breastfeeding, and about a third of women had introduced other fluids within three days of birth (Doherty et al., 2012). These low rates of exclusive breastfeeding provide a backdrop to migrant women's perspectives on breastfeeding in Cape Town.

There are documented consequences to low rates of breastfeeding and poor complementary feeding: In South Africa, stunting is the most common nutritional disorder amongst South African children, affecting 18% of children in 2005 (Berry, Hall & Hendricks, 2010). Rates of stunting among migrants in South Africa are unknown. Dietary guidelines for young children have been divided into the age groups zero-six months, six-12 months, and one-seven years (Bourne, Hendricks, Marais & Eley, 2007). This is in contrast with the WHO definition of complementary feeding period as the period up to two years; the rationale is that it is also recommended that by 12 months children eat the same foods as the family (Bourne et al., 2007). The programmatic focus for babies age six-12 months (and other age categories) is on "total health and well-being" rather than solely on nutrition, including nurturing, oral hygiene, and clinic attendance (Bourne et al., 2007). In focus group discussions testing the appropriateness of this messaging, it was apparent that the term "exclusive breastfeeding" was misunderstood. Adding cereal to feeding bottles at an early age was not considered "solid food" (Bourne et al., 2007). As with other breastfeeding studies, focus group participants raised the issues of lack of breast milk, an infant preferring a bottle, and being instructed by a doctor to stop breastfeeding, as key barriers to exclusive breastfeeding (Bourne et al., 2007).

Table 1: Key infant nutrition indicators for Democratic of Congo and Zimbabwe- unavailable for South Africa and Somalia (WHO, 2010)

Indicators	Democratic Republic of Congo (%)	Zimbabwe (%)
Early initiation of breastfeeding (first hour after birth)	48	68
Exclusive breastfeeding under six months	36	22
Exclusive breastfeeding at four-five months	17	14
Children ever breastfed	98	98
Continued breastfeeding at one year	91	90
Continued breastfeeding at two years	64	28
Age appropriate breastfeeding	61	59
Predominant breastfeeding under six months	58	66
Bottle feeding	8	6
Introduction of solid, semi-solid or soft foods (all children, six-eight months)	81	92
Minimum dietary diversity (all children six-23 months)	12	22
Minimum meal frequency (breastfed children six-23 months)	30	55
Minimum acceptable diet (breastfed children, six-23 months)	4	13
Infant mortality (rate per thousand live births)	126	62
Under-five mortality (rate per thousand live births)	199	96
Underweight	28	14
Stunting	46	36
Overweight	7	9

South Africa’s very low rate of exclusive breastfeeding is related in part to the policy focus on the risk of HIV transmission at the expense of breastfeeding promotion, and in part to formula marketing (Chopra et al., 2009). It is only recently that South Africa has favoured the adoption of international breastfeeding guidelines among HIV positive women, in light of evidence that the risks of transmission are outweighed by the benefits of breastfeeding and the risks of formula feeding in low-resource settings (Meyer et al., 2007). Chopra and colleagues (2009) present evidence that, together with HIV therapy to prevent mother-to-child transmission, appropriate feeding choices- primarily exclusive breastfeeding- “could save 37 200 children’s lives in South Africa per year in 2015 compared with 2008” (p.835). The interventions recommended by Chopra (2009) included preconception folic acid supplementation, care for sick babies and kangaroo mother care¹⁰ for preterm babies, exclusive breastfeeding rates increased to 50%, together with exclusive

10 Kangaroo mother care emphasizes early skin-to-skin contact and carrying of baby (Doyle, 1997). This method is promoted as particularly valuable in the context of preterm births and low-birth weight infants.

replacement feeding (formula) among 40% of the population and 10% mixed feeding (Chopra et al., 2009). Chopra also discusses the failure of leadership and accountability as one cause of the failure to deliver comprehensive health care services to women in South Africa. The recent *Roadmap to Nutrition: 2013-2017*, published by the South African Department of Health (DoH, 2013), embraced notions of adequate nutrition as a human right, and on focusing on nutrition during pregnancy and the first two years of life, as the crucial window of opportunity for improving health. Thus while there is a clear policy agenda to improve the health of South African residents, there are also significant challenges to actually rolling out evidence-based interventions. For those, including migrants, who may be excluded from such interventions due to language, socioeconomic status or legal status, improving infant nutrition involves purposively garnering more marginalised perspectives on their feeding choices.

Migration and maternal and infant nutrition

In recent years, several studies of breastfeeding in the context of migration have been published. Dennis and colleagues (2012) argued that the relationship between migration and breastfeeding rates is not well understood, and set about to contribute to an area where there have been very few comparative studies. In a sample of 1875 migrant and non-migrant women, controlling for variables such as age, education, and parity, African migrants were most likely to breastfeed, and migrant women were almost twice as likely to be breastfeeding at 16 weeks postpartum, as compared to Canadian women (Dennis et al., 2012). However, this study did not measure the exclusivity of breastfeeding. In light of the statistics in Table 1, which are in common in other African countries, one may posit that many of the breastfeeding mothers were not exclusively breastfeeding. Nevertheless, Dennis et al.'s study suggested that African migrants retained some breastfeeding norms from their home countries, which is consistent with another large study, set in Switzerland, which suggested that breastfeeding rates are to some extent carried over from migrants' countries of origin (Merten, Wyss, & Ackermann-Liebrich, 2007). In a quantitative study of breastfeeding initiation at a large Baby-Friendly hospital (joint initiative of WHO and UNICEF to encourage breastfeeding) in Australia, there was significant variation in the rates of breastfeeding initiation among Turkish (98% initiation), Australian (84%) and Vietnamese (75%) women (McLachlan & Forster, 2006). While it is difficult to draw comparisons between these studies and the South African context, these studies highlight differences between migrants and native-born breastfeeding rates.

There is some indication that migrant breastfeeding rates may in some cases decline with length of residence in the new country. For example, Vietnamese migrants' breastfeeding rates seemed to be in decline with length of residence in Australia (McLachlan & Forster, 2006). The authors posited that this decline in breastfeeding rates among Vietnamese migrants may be explained in terms of convenience, decreases in social support, and the desire to conform to the perceived cultural norms in the new country. Despite giving birth in a designated Baby-Friendly hospital, 40% of Vietnamese women gave their babies formula in hospital. In another study, given these declining rates of breastfeeding, a study of Chinese mothers in Australia emphasized the need for "ethno-specific" services, as well as the potential of peer support groups (Diong, Johnson & Langdon, 2000). However, this decline is dependant a multiplicity of factors, including

the baseline rates of breastfeeding in the migrants' old and new countries of residence.

Of these factors, this decline in migrants' breastfeeding rates has been explained in terms of the breastfeeding norms in the new country, as well as in terms of the supportive network available to mothers. For example, in the United Kingdom (UK), Pakistani and Bangladeshi immigrants felt that "everyone" (in the UK) bottle-feeds (Schmied et al., 2012). Schmied and colleagues (2012) also suggested that, in the absence of a supportive network, women might turn to health professionals for advice. Notably, all studies are set in high-income countries, were primarily descriptive and few outlined theoretical frameworks. In South Africa—and LMIC more broadly—the interactions between breastfeeding norms and other factors are poorly understood and may be different from those in HIC, given that both the economic and social context are unique.

There is a growing body of literature that suggest that older women relatives, particularly mothers and mother-in-laws, provide important support that guide the feeding practices of first-time mothers. The next section will discuss in more detail the role of elder women and other community members in non-migrant contexts, setting the stage for this study's exploration of how women navigated nutrition in Cape Town. I return to the concept of social capital to help frame this role.

The role of elders in migrant maternal and infant nutrition

Studies that relate social capital to maternal and infant nutrition are especially pertinent in the migrant case, because of the ways social support changes with migration. That is, to the extent that social support is embedded in one's physical environment, a change in physical environment would force a change in the patterns of social support. As presented in the previous section relating migration and social capital, social capital provides a framework for understanding the relationships between perceived social isolation and health. It also provides a way of considering lack of connection to public services.

In recent years, the role of elder women, and particularly grandmothers¹¹, has been highlighted in the literature as one important influence of maternal and infant health in LMIC (Aubel, 2012; Bezner Kerr et al., 2008). Even in the South African context grandmothers have been cited as an influence on infant feeding (Bland et al., 2002). Where elder women convey norms related to maternal and infant feeding, these norms and support of grandmothers may or may be in line with WHO recommendations (Aubel, 2012; de Flores, 2010; Furuta & Mori, 2008; WHO, 2010a; Ye et al., 2010). Elders' beliefs about infant nutrition often differ from the WHO recommendation of exclusive breastfeeding for the first six months of a baby's life. For example, before an educational intervention, relatively few grandmothers in Aubel's (2004) study of elders in Senegal subscribed to exclusive breastfeeding recommendations (29%) or putting a newborn to the breast in the first hour after birth (46%). Nevertheless, considering the role of grandmothers is important in the case of migrants to South Africa because this key influence in maternal and infant nutrition is now absent. Unlike certain other migrant contexts, grandparents seldom seem to migrate in the South African case.

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11 I use the term grandmother as used by Aubel and others: "to refer not only to biological grandmothers, but also to other experienced women who serve as advisers to younger women on various household issues." (p72 Aubel, 2010)

Migrants' perspective on this absence offers valuable insight into maternal and infant nutrition in migrant contexts.

At the forefront of research assessing the role of elders in health promotion, The Grandmother Project has studied the influence of elders on health around the world, and evaluated interventions that make use of this influence in infant feeding (Aubel et al., 2010; Bezner Kerr et al., 2008). One study, set in Senegal, set out to evaluate the efficacy of educating grandmothers over the course of several workshop sessions (Aubel et al., 2004). Assessing the effect of the intervention 12 months after the workshops took place, the study showed that not only was grandmothers' nutritional knowledge greatly improved but this knowledge had also improved the nutrition related practices amongst young women (Aubel et al., 2004). Another study included 416 women based in Bolivia, highlighting the influence of grandmother education on daughters' breastfeeding initiation rates (Bender & McCann, 2000). A qualitative study of grandmothers in Malawi further emphasized the authority role of elder women which in turn had an impact on mothers introducing non-breast milk foods and liquids early in an infant's life (Bezner Kerr et al., 2008). In a study of allomaternal (non-mother) caregivers in the Congo, Fouts & Brookshire (2009) asserted that cumulatively, allomaternal caregivers fed children more than a child's mother. These studies collectively present the case that, for nutrition projects to be effective, they should include extended family in interventions. In a migrant context, it becomes important to investigate which family members should be included in interventions, if any.

Recently, a qualitative study investigated the role of transnational migration on breastfeeding practices (McFadden et al., 2014). Based on 23 in-depth interviews with women of Bangladeshi origin in the UK, as well two focus groups with Bangladeshi grandmothers (n=14), the study supported the importance of grandmothers in providing both physical support and conveying knowledge. The study argued for the importance of the role of grandmothers, while highlighting the ways in which this role had been disrupted by migration. Proposing a family inclusive approach to breastfeeding promotion, the study also emphasized the complexity and nuance of integrating the new (UK) context with the old (Bangladeshi) context. Importantly, Bangladeshi grandmothers were present in the UK.

In studies of elder women's influence on maternal and infant feeding, the behaviours that constitute support have been categorised in the literature as:

1. Practical support, including help to younger women with child care and housework
2. Cognitive support, consisting of information and advice to promote health and well-being and to deal with illness
3. Emotional or affective support including love, caring such as money, food, or other tangible assistance (Adams, Madhavan & Simon, 2002; Aubel, 2012).

These categories roughly map to House's broader categories of social capital (see p.16). It is relevant to consider how these specific categories of support were replaced or transformed in the context of migration.

In their study of maternal social capital and child nutrition, De Silva and Harpham further illuminated the role of social capital in nutrition:

Social connectedness may enable mothers to KNOW more due to knowledge transfer (For example, where to obtain additional cheap sources of food), THINK differently due to

attitude influences (e.g. attitudes towards hygiene practices) and to DO things differently (e.g. breastfeed for longer)... Social capital can also enable mothers to FEEL different.

(De Silva & Harpham, 2007, p.342, emphasis in original)

Migration can also affect knowledge, thoughts, actions and feelings, for many of the same reasons as social capital. These categories of social support and connectedness provide a detailed view of the mechanisms through which social capital and maternal and child health may be connected. They include assessment of norms of trust (how people feel) as well as participation (what people do).

In the case of migrants, changes in nutritional practice are thus set against the contexts of altered practical, cognitive, and emotional support. De Silva and Harpham (2007) found limited association between structural measures of social capital (what people *do*, membership in groups) and child nutrition, whereas more positive cognitive social capital (how people feel- notions of trust and reciprocity) was associated with better child nutritional status across the four places included in the study (Peru, Ethiopia, Andhra Pradesh in India, and Vietnam). Moreover, the study found that high levels of cognitive social capital seemed to provide a buffer against the effects of poverty on child height-for-age in Andhra Pradesh. Moreover cognitive support from individuals was more beneficial for child weight-for-age among non-poor people in Vietnam. (De Silva & Harpham, 2007). That is, the authors hypothesized individuals who are part of homogenous, impoverished, networks may *not* be able to give and receive effective support.

A mix of positive and negative associations led De Silva and Harpham (2007) to suggest that longitudinal or qualitative studies may be able to better tease out the relationships between social capital and maternal and child wellbeing- indeed, that there is a need to find “country-specific ways of protecting and strengthening maternal cognitive social capital” (p.353). They also highlight the need for understanding social capital and child nutrition in the context of migration and urbanization (ibid.). Their study findings on the importance of cognitive social capital is consistent with other research that has found that informal networks seem to be better at providing protective health effects than formal support (Glanz et al., 2008). Exploring migrants’ informal and formal networks of support in relation to maternal and infant nutrition in Cape Town responds to both the need for contextual specificity in understanding and improving nutritional behaviours, as well as the need to understand nutrition in the context of migration and urbanization.

Conclusions

While largely unexplored in the context of South-South migration, understanding maternal and infant nutrition is an important first step to improving the health of migrant populations in LMIC. The existing literature broadly relating migration and health in HIC has offered important insights into the factors that impact health and disease for migrants. Disproportionate burden of disease among migrants has been associated with poor socioeconomic status, racism, lack of integration to a new society, and western diet. However, the factors uncovered in HIC may be not transferable to LMIC, or to maternal and infant nutrition. This dearth of literature presented an opportunity to break new ground in 1) describing migrants’ socioeconomic realities and living conditions in Cape Town, 2) analysing migrants’ descriptions of maternal

and infant nutrition in South Africa, and 3) framing these realities theoretically, particularly in relation to social capital.

In a middle-income country like South Africa, there is an opportunity to understand and make sense of how women prioritised their children's health, and to reach beyond the minimum health goal of "survival". This study therefore explored participants' perception of the role of nutrition in their child's health, considering the ways that health and nutrition was understood for migrants in Cape Town.

The role of grandmothers- or elders in general- has been explored in the context of maternal and infant nutrition, particularly in LMIC. Yet this role is not yet understood in the context of shifting family structure- such as in the case of migrant women. As such, this study offers new insights into maternal and infant nutrition given that 1) elders have been shown to be important to maternal and infant nutrition in many contexts across Africa and 2) while it is not clear from the literature review, it appeared that few elders are present in migrant communities in Cape Town.

In this chapter, I built on the notion that migration is a social determinant of health, and that exploring maternal and infant nutrition in the context of migration may offer new insights into the specific ways that migration may shape health. Chapter 3: Methodology will detail the study design as well as build a rationale for using two qualitative methods (focus groups and in-depth interviews) and sampling from three migrant countries of origin (Democratic Republic of Congo, Somalia, and Zimbabwe).

Chapter 3: Research methodology

Introduction

In the previous chapter, I situated the study within the broader migrant health literature, as well as the maternal and infant nutrition literature. This chapter will present the qualitative methods used to collect and analyse the study data, as well as the research context in Cape Town. I include particular detail on how I collected data amongst a fairly hard-to-reach group, and across cultural and linguistic lines. My role as a researcher—as well as the role of reflexivity—is woven into the chapter. I undertook all fieldwork and analysis, with input from others, including bilingual bicultural research assistants, to strengthen the study design and findings (Lincoln, 1985).

Research study design

The study employed three main qualitative data collection methods to best address the research questions:

1. In-depth interviews with a purposively selected group of Somali, Congolese¹², and Zimbabwean recent mothers with children under the age of two (N=23).¹³
2. Nine focus group discussion with Somali, Congolese, and Zimbabwean men and women (N= 48). This included two women’s-only focus groups with each migrant group, and one men’s-only focus group with each migrant group.
3. Lastly, my own observations as a researcher were documented in a research diary and analysed to help contextualise and deepen the transcripts produced by the first two research methods.

Qualitative methods

The field of maternal and infant nutrition lends itself to nuance-- diet is extremely complex-- and quantitative instruments could not capture this nuance. For example, facing this challenge in the context of a large quantitative multi-country study, De Silva and Harpham (2007) suggested the need for qualitative studies of social capital and maternal and infant health. This is especially true in a migrant context, where existing nutritional instruments may not be valid. Thus to better understand migration as a social determinant of health, it was most effective to explore migrants’ lived experiences in South Africa, and learn how these related to nutrition.

This study used thematic analysis as both a methodological approach and an analytical tool. As an analytical tool, thematic analysis is a well-known and commonly used means of making sense of qualitative data (Braun & Clarke, 2006). However, it is less well-known as a methodological starting point, despite

12 The commonly used terms “Congo” and “Congolese” will be used to refer to participants from the Democratic Republic of Congo (DRC).

13 There was a large body of research that supported the inclusion of mothers of children up to age 2, as this is considered the “crucial window of opportunity for reducing undernutrition and its adverse effects” (Bryce, Coitinho, Darnton-Hill, Pelletier, & Pinstrup-Andersen, 2008, p.510)

the fact that it is widely used. In defining the scope and orientation of this study, I drew on the work of Braun and Clarke (2005), who outlined and provided a vocabulary for the use of thematic analysis in qualitative research. They argue that many qualitative studies are essentially thematic, but not claimed as such, leading to the misuse of methodologies such as discourse analysis (Fairclough, 1992), content analysis (Meehan, Vermeer, & Windsor, 2000), or grounded theory (Strauss & Corbin, 1990). In this study, thematic analysis involved the explicit use of inductive, followed by deductive, coding.

This approach emerged from the relatively exploratory nature of the study, as well as from epistemological roots of qualitative research. While quantitative research tends to adopt the positivist assumption that the world is “composed of observable facts,” (Ulin, Robinson, Tolley, 2005; Loc 796, 9%, Kindle eBook) the qualitative paradigm adopts the interpretivist assumption that truth and reality are more fluid, and may be seen from multiple perspectives. As such, “qualitative studies seek discovery, understanding, and insight into the circumstances of human behaviour” (Ulin et al., 2005, Loc 796, 9%). In the context of breastfeeding and nutrition more broadly, it certainly resonates that health must be both conceived of and realised in multiple ways. As such, the study’s qualitative methods are broadly rooted in social constructionism, which emphasises the ways in which our experiences of the world are culturally and historically situated (Burr, 2003). Given the multiplicity of perspectives, rather than attempting to eliminate the influence of the researcher or cast this influence as “bias”, I focused on providing a level of transparency around the ways that information was gathered and analysed. This approach draws out the experience and contextual realities in hard-to-reach migrant communities in an under-researched area.

Research site

Cape Town research setting

This section unpacks this research context, with the goal of understanding the extent to which findings may or may not be applicable to other research settings or other population groups (Ryle, 1949). I conducted interviews and focus groups over a period of eight months, from February to October 2013. I interviewed migrant women throughout Cape Town including in Salt River, Bellville, Brooklyn, Phoenix, Wynberg, Goodwood, Kensington, and Philippi (see Figure 3 and 4). These neighbourhoods are ethnically and socioeconomically diverse. With the exception of Bellville, where large numbers of Somalis were concentrated in a small area (“little Mogadishu”), migrants were usually a minority in their neighbourhoods of majority Xhosa-speaking black South Africans- some of whom are also migrants- and Cape coloureds¹⁴. Somalis’ concentration in Bellville has been understood in terms of Somali communities being close-knit, perhaps because of their linguistic, cultural distinctiveness with respect to other South African and migrant populations.

The Western Cape has relatively good access to free antenatal care, and all women received care at some point in their pregnancy. All received care in government-run rather than private hospitals. The

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14 The term “Cape Coloured” refers to the predominant population group of the Western Cape, who are of mixed African, Asian, and European ancestry. The term was used under apartheid, but has come to denote a specific, usually bilingual Afrikaans-English speaking, ethnic group.

government run maternal health system has two levels: midwife obstetric units, and mid-level hospitals for more complicated cases. Patients are referred to antenatal care based on where they live. One participant in this study gave birth at home unassisted because she was unable to afford transportation to the hospital and an ambulance did not arrive, while all other participants gave birth in a hospital. The issues relating maternal and infant nutrition to hospital care will therefore primarily be discussed in the context of the public health care setting. Despite accessing care during pregnancy, issues of maternal and infant nutrition related not only to access to care, but also to much broader contexts, as well as to the quality of care.

Migration is inevitably rooted in geography. Cape Town is a necessarily different backdrop for this study, as compared to other urban centres in Africa and around the world. I highlighted the particularities of this city throughout the dissertation, but also the similarities between the migrant experience in Cape Town and other cities in both developed and developing countries. While Cape Town has better social services relative to many African cities, many of the issues of urban poverty are similar to other African cities, and thus the study findings may resonate with the issues of migration for African populations to urban centres around the world.



Map Sources: UNCS, ESRI.
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Map created in Aug 2013.

Figure 2: Map of South Africa



Figure 3: **Locations of in-depth interviews and focus groups in Cape Town.** Represented by migrant group (Somali: triangle, Zimbabwean: circles, Congolese: squares).

Study population and recruitment

Research with marginal or vulnerable groups, including migrants, requires a level of trust between researcher and migrant populations. Creating this trust required significant groundwork and a careful balancing of physical presence, understanding of the communities studied, and some degree of neutrality and “safeness” (Ulin et al., 2005). Interviews with migrants involved recruitment and trust building across language, culture, and class. Migrants had significant social and economic constraints, and were often undocumented or on the margins of society. Given these challenges to recruitment, the sample was primarily a convenience sample begun through snowball sampling. This is an effective technique amongst hard-to-reach populations (Sadler, Lee, Lim, & Fullerton, 2010). The sampling method of maximum phenomena variation (Miles & Huberman 1994), in which a researcher seeks as many divergent perspectives as possible, was an important consideration in the study design. However, it became clear that this research was somewhat exploratory in nature, where it was not known on what axes divergent perspectives would emerge. That is, it was not immediately apparent from the literature what key factors would influence maternal and infant nutrition. As such, for the in-depth interviews, study participants fitted the following inclusion criteria: women over the age 18 who were currently pregnant or had given birth in the last two years, and self-identifying as Somali, Congolese (from DRC), or Zimbabwean. The decision to sample from these three communities will be discussed in the next section.

To begin to establish these relationships of trust and mutuality, I began outreach with individual contacts- friends and acquaintances- that led to formal introductions at several refugee or cross-border migrant serving agencies. I had conducted previous research with members of one social service/advocacy agency (MSF, 2011). Within the three communities of origin, introductions were a vital part of the research process, of gaining trust and visibility within three communities. They are also very important to understanding the contexts, power relationships, and agendas at play within each research context (Ulin et al., 2005). In order to avoid presenting myself as affiliated with a specific organisation or group (Zhang & Wildemuth, 2009), or including only participants linked to a specific person or organisation, I recruited participants from each community via at least three different initial contacts. As a white woman I stood out in all the neighbourhoods in which I collected data, so it was very important to ask when and where I could be present. In particular, I had to be very clear that I was not from the United Nations High Commission for Refugees (UNHCR) and I was not favouring specific people in communities.¹⁵ As an outsider working with vulnerable populations for a limited time, it was extremely helpful that my investigation of maternal and infant nutrition was generally not a sensitive topic. Rather, the topic seemed neither threatening nor extractive and was a topic that both men and women wanted to talk about. Through these initial contacts for each target group, I met with migrant community leaders and members of service and advocacy agencies from the three communities selected. I introduced myself, answered questions and discussed concerns, and requested help recruiting interview participants. Details of this process in each ethnic community will be discussed below.

The decision to sample from three communities emerged from the literature that describes certain habits and beliefs as ethnically or geographically specific, where I posited these “local” habits reproduce or shift in the context of family and community. Including three distinct migrant “communities” highlighted the central theme of migration, rather than culture. I used the term “community” to refer to common national background, rather than physical proximity within the Cape Town metro area. As shown in Figure 2, migrants were living in many areas of the city. Somali, Congolese (DRC) and Zimbabwean populations were selected primarily because they are three of the largest migrant nationalities within South Africa, and because of their apparently equal distribution of men and women (UNHCR, 2012). Somalis, Congolese and Zimbabwean migrants speak different languages and seemed to have a diversity of migration experiences. While conclusive numbers for each national group do not exist, other relatively large cross-border populations in Cape Town include Malawians, Ethiopians, and Nigerians. I felt that the inclusion of these additional groups would have made it more difficult to note heterogeneity and homogeneity within and between migrant nationalities.

Each national group included in this study has a different cultural, linguistic, and historical background. Given the colonial nature of African borders, each national background also conceals significant heterogeneity.

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15 In the absence of refugee camps in South Africa, the UNHCR resettles small numbers of especially vulnerable refugees out of urban South African settings every year. Despite the very low probability of actually being resettled in a new country (usually the U.S.A), for many migrants this remote possibility was presented as providing hope and motivation in the context of a very vulnerable existence in Cape Town.

Congolese and Zimbabwean participants had multiple first languages and different cultural backgrounds. Both Muslim and Christian migrants were included in Congolese recruitment. Somalis are culturally, historically and linguistically quite different from Congolese and Zimbabwean migrants. For example, Somalis mostly share one common language (Somali) and religion (Islam). By recognizing this diversity and investigating three groups with significant cultural and historical differences, the study was able to grapple with how maternal and infant health is produced and conceptualised in the context of a common experience of migration, while allowing for some differentiation on the basis of different national backgrounds. As the sample size of each migrant group was relatively small, I have been careful not to make this a comparison of various migrant groups (Congolese, Somali, Zimbabwean), but rather focused on migration as an overarching theme. The following sections will provide a very brief background of the maternal and infant health context for migrants from Somalia, DRC and Zimbabwe, as well as briefly explore what is known about these migrant groups in South Africa and their recruitment in this study.

Somalia

Key indicators for maternal and infant health in each migrant producing country of interest are worse than in South Africa. Somalia has one of the highest rates of maternal mortality in the world: 1200 women per 100,000 live births (United Nations Statistics Division, 2012), with a 1 in 14 lifetime risk of maternal death (UNICEF, 2010a). Infant mortality is also high, at 100 infants per 1000 (United Nations Statistics Division, 2012). This is compounded by an under-five mortality rate of 162 per 1000 (United Nations Statistics Division, 2012). The lack of medical care during pregnancy contributes to high maternal mortality with two thirds of pregnant women receiving no prenatal care, and less than one third of women having a professional birth attendant present at their births (Herrel et al., 2004; UNICEF, 2010a).

Estimates of the number of Somalis in South Africa are in the range of 27,000-40,000 people (Jinnah, 2010). Much of Somali migration to South Africa can be traced from 1994 to the present, primarily as a result of the civil war in Somalia, which began in 1991 and continues to the present. Somalia is far more homogenous than most African countries, where almost everyone speaks Somali and 99.9% of the population are practicing Muslims. The Somali Diaspora is renowned for mobilising both money and political will in the interests of extended family members, making Somalis simultaneously well supported- within their own community- and marginalised- from other people living in Cape Town (Gastrow, 2013). In Johannesburg, Somalis are almost exclusively located in Mayfair (Jinnah, 2010). In Cape Town, Somalis live primarily in Bellville and the surrounding areas, collectively called the Northern suburbs (see Figure 3). These suburbs were historically Afrikaans speaking, and were predominantly white during apartheid. Between 2002 and 2010, over 700 Somalis were killed in xenophobic attacks across South Africa (Mhlanga, 2011). Much of this violence occurred in the Cape Town area, where many Somali shop owners reside and where the Somali community is well organized. Incidents of xenophobic violence continue, and there is a widespread mythology in Cape Town that paints Somalis as wealthy and unscrupulous. This study shows that this mythology is not rooted in fact, in that most Somali participants in this study lived in substandard housing and faced serious economic insecurity. Nevertheless, for Somali migrants, this perception of Somalis as

wealthy business owners has profound effect on their sense of safety in Cape Town, as well as the insularity of the community as a whole.

Somali recruitment

Having conducted research alongside Somalis in other settings (Geltman et al., 2013a; Geltman et al., 2013b; Hunter Adams 2013), I knew it was particularly important to show respect to multiple agencies and introduce myself thoroughly. Despite having had previous contact with Somali store-owners around Cape Town, I was particularly dependent on “gatekeepers” who could introduce me and vouch for my intentions. I was introduced to a leader of one Somali organization (Somali Association of South Africa) via a colleague. I was introduced to a Somali hawker woman via a Somali colleague at University of Cape Town (UCT). Thirdly, the wife of a Somali student at UCT recruited participants for one Somali women’s focus group.

Recruitment was challenging as Somali women often did not speak English; some women did not read and write. As the in-depth interview required significant time and a quiet space, planning was important and yet I needed to hold these plans lightly, as at times women were called away at short notice. As most Somalis are adherent and conservative Muslims, appearance was important: I dressed in loose-fitting clothing that covered my legs and elbows, but I did not cover my hair or otherwise imply I was Muslim. In doing so, I presented myself as a respectful outsider.

Only one individual declined to participate; a Somali women who initially came to be interviewed left when given the informed consent form to sign. It appeared she was very concerned over what the form meant, as she could not read. While this was the only overt instance of an individual from any of the three migrant groups declining to be interviewed, other potential participants may have declined when recruited by intermediaries such as interpreters.

Most in-depth interviews with Somali women took place in their homes, as per their preference, where a family usually occupied a single room, and shared the flat or house with multiple families. The quality of housing ranged from apartments/flats in well-maintained blocks to housing that was informal and poorly maintained, such as converted warehouse spaces and run-down and subdivided single-family homes.

Democratic Republic of Congo

In Congo, on-going conflict means that government services are interrupted and in disarray, with very high rates of maternal mortality (670 per 100,000 live births), infant mortality (109 per 1000 live births), and under five mortality (180 per 1000 live births) (United Nations Statistics Division, 2012). Maternal mortality remains high, at 534 per 100 000 (Hogan et al., 2010). While the rates of prenatal care are not known, about two thirds of births in rural areas of DRC are attended at home by traditional birth attendants (Matendo et al., 2011). Indeed, training of Congolese birth attendants has been associated with decreased perinatal mortality (Matendo et al., 2011). Although Congolese migrants to South Africa mainly hail from the Congolese middle class, the Congolese health system has long been in disarray and women may still not have accessed routine care. Research articles pertaining to Congolese women’s health have largely focused on gender-based violence (Pavlish, 2005; Cornu et al., 1995; Mels, Derluyn, Broekaert, & Rosseel, 2010).

Congolese migration to South Africa and other countries has been a mixture of refugees, asylum seekers,

and undocumented migrants. Congolese migration to South Africa grew during the 1990s, starting with the flight of middle-class Congolese, and followed by forced migrants fleeing back-to-back civil wars. Today, there are about 13,000 Congolese in South Africa with official refugee status, and many more with comparable experiences of violence, who may either be awaiting asylum determination, or be undocumented (Consortium for Refugees and Migrants in South Africa, 2009). Asylum determinations in South Africa can take many years, during which applicants must report to South African Home Affairs on a regular basis- as often as once a month. Going to Home Affairs can take up one or more workdays every month, placing one's job at risk and reducing family income.

After Somalis, Congolese have remained as one of the largest refugee groups in South Africa since 1994. According to the somewhat out-dated baseline survey of 2003 of legally recognized Congolese in South Africa, the population appears to be middle-class, young, and male (Steinberg, 2005). In this context, Congolese refugee women join a markedly different household and community than in their home country. Journeys to South Africa were often dangerous and stressful, and sexual violence against women was widespread in Congo and on the journey to South Africa (Wakabi, 2008) (Taback, Painter, & King, 2008). On arrival, they do not join the South African middle-class. Rather, they are much more likely to be unemployed, or doing unskilled work, in particular in the security industry. Most Congolese tend to be isolated and only connected to other Congolese (Steinberg, 2005).

Congolese recruitment

Within the Congolese community, I began interviews in Salt River through the connections of a Congolese woman living in Salt River whom I had been introduced to by a University of Cape Town colleague. Given the challenges of establishing trust and getting to know migrants, this means of introduction to Congolese migrants in Salt River was primarily pragmatic. There are a fairly large number of Congolese migrants living in Salt River. Salt River is an old neighbourhood, and is now home to many migrants, as well as Muslim Cape-coloureds who have lived in the neighbourhood for generations. At the cusp of gentrification, it is currently run down, with many poorly maintained illegally subdivided homes. There are no large supermarkets in the neighbourhood, but there are many small Congolese-operated stores, as well as street vendors. Beginning recruitment in Salt River was primarily practical, in that I lived nearby and knew I could be flexible and quickly available as I came to know members of the community and began interviewing women. Again, because I lived nearby, I was generally around and about the neighbourhood when I was not officially "doing research." That is, I bought groceries at Congolese shops and went to the park with my children. I first worked with a potential interpreter-turned-facilitator, who identified my first five interviews (see section on interpretation). Secondly, I recruited Congolese vendors working in Cape Town city centre through the introduction of a colleague to one vendor. Thirdly, I recruited participants at a refugee women's shelter, where particularly vulnerable refugee women stay for six months and receive skills training. These three approaches allowed me to meet and interview Congolese women with diverse experiences of migration.

I brought baby clothing to the shelter and to other community organisations (eg. World Wide Women and Bonne Esperance), and spent time interacting with children at the refugee women's shelter, which helped to establish a basis of trust before beginning interviews or focus groups. While I made it clear I was

a researcher, the term “researcher” in itself was not a meaningful designation to most people. It was more meaningful to explain, in the context of informed consent, the scope of my role. Congolese participants, as with all three migrant groups, were selected primarily based on their willingness to be interviewed about their maternal experiences, and the experiences of feeding their infants in Cape Town.

Zimbabwe

For over twenty years, food production in Zimbabwe has fallen and rampant inflation and fuel shortages mean that the livelihoods of Zimbabweans have been under continuous threat for over a decade. This has led to increased flows of Zimbabwean migrants to South Africa, and the lines between “economic migrant” and “refugee” are blurry at best. Rates of infant mortality (56 per 1000) (UNICEF, 2010b), and maternal mortality (790 per 100,000) (UNICEF, 2010b), are high, as are rates of TB and HIV/AIDS infection. The increase in maternal mortality ratio between 1980 and 2008 was the highest in the world, with an increase of 5.5% to 624 per 100 000 (Hogan et al., 2010). Over the past decade, HIV infection has been a key consideration in maternal health in Zimbabwe, and has dominated the literature. A study based in the Zimbabwean district of Marondera found that factors related to higher perinatal mortality included lack of education, HIV infection, having a home delivery, and preterm delivery (Tachiweyika et al., 2011). One study set in the Gutu province found only a marginal association between pregnancy complications and lack of antenatal care; only women with high-risk complications benefited from specialized care (Majoko, Nystrom, Munjanja, Mason, & Lindmark 2005). Traditional Birth Attendants (TBAs) have long played a pivotal role in most African countries, including Zimbabwe; however training for TBAs may not always increase knowledge or the adequacy of care TBAs provide (Bankson, 2009).

The Forced Migration Studies Program in Johannesburg estimates that there are between 1 and 1.5 million Zimbabweans in South Africa, making them by far the largest non-South African population in the country (Consortium for Refugees and Migrants in South Africa, 2009). The Zimbabwean population in South Africa is very diverse: both in their reasons for leaving Zimbabwe, status, education/skills; there is no one Zimbabwean “community”. Despite sometimes being labelled as economic migrants, Zimbabweans may be as vulnerable or more vulnerable than other refugee groups. Due to the proximity of Zimbabwe to South Africa, Zimbabweans with few resources have arrived in South Africa, and often have no legal status. Rather than being concentrated in a specific neighbourhood, Zimbabweans are spread across Cape Town.

Zimbabwean recruitment

Recruitment of Zimbabwean in-depth interview participants proceeded relatively smoothly as I had worked with the two main Zimbabwean community organizations, located in Wynberg (PASSOP) and Observatory (Adonis Musati Project), in the past, and after they provided initial contacts the sample quickly snowballed. I also recruited participants from the refugee women’s shelter described in the section on Congolese recruitment. The relatively large size of the population, as well as the fact that Zimbabweans are usually comfortable in English, greatly facilitated recruitment and the quality of interviews. A fair number of interviews had to take place on the weekend or outside of work hours because many Zimbabwean women were employed, which did not seem to be as common for Congolese and Somali women. Unlike Somali and

Congolese migrants, some Zimbabweans do live in informal settlements in Cape Town. Zimbabweans were interviewed in Brooklyn, Woodstock, Phoenix, Philippi, Green Point, and Parow (see figure 3).

Qualitative methodologies

In-depth interviews

Previous research has argued that in-depth interviews are “the most appropriate method of gathering case-rich data to identify beliefs, perceptions, attitudes, and opinions that are otherwise hidden in people’s minds” (Wulandari & Klinken Whelan, 2011, p.868). An interview guide was developed (Appendix 2) rather than a set of predetermined questions in order to allow for the evolution of new ideas and questions during the flow of conversations with the study participants (Ulin et al., 2005, loc 1481, 16%; Wulandari and & Klinken Whelan, 2011). The interview guide helped ensure that specific topics related to the research questions were covered, while maintaining the language and flow of participants’ thoughts and discussions as they developed. The topics in the research guide were guided by WHO recommendations (WHO, 2010a) for maternal and infant nutrition, as well as by the Adams and colleague’s (2002) outline of social support in the context of maternal and infant nutrition. These specifically related to participants’ beliefs and understanding of their nutrition during pregnancy, the nutrition of their infant, and the cognitive, emotional, and practical support provided by household members, particularly elders (Bhandari, Kabir & Salam, 2008; HRW, 2011). I did not ask about HIV status, as this seemed potentially sensitive and previous studies have indicated that HIV may not significantly impact infant weight- and by extension nutrition- during pregnancy (Gewa, Oguttu & Yandell, 2012).

Lincoln and Guba (1985) suggested that “credibility” of an interview is dependent on how information is elicited in the interview setting, without undue leading or imposition of ideas. Yet the “open-endedness” of in-depth interviews is also contested: Hammersly and Atkinson have suggested that silence and passivity of the interviewer in an interview setting is in itself a form of control (Silverman, 2011, p.125). Feminist researchers have advocated sharing of personal stories that might in a positivist paradigm, be considered a form of bias (Silverman, 2011). A constructionist approach- to the extent that constructionism considers both the broad interview context and the details of the interview itself- suggests that an interviewer and interviewee co-construct reality (Silverman, 2011, p.131). My own experience as an in-depth interviewer with limited experience initially involved trying not to sway the interviews at all with my own views (Lincoln & Guba, 1985). However, I discovered that at times my ability to let the participants voice be heard was actually impeded by my own attempt to be invisible, or less visible, because they took their cue from my own formality. After two or three interviews in which I guarded myself relatively carefully, I tried to have a more natural conversation which very occasionally involved sharing some part of my own story as a parent in a non-judgemental way (Silverman, 2011).

In qualitative research, the strength of research rests in the depth of analysis, the ways participants’ experiences are represented and framed and conveyed (Baker & Edwards, 2012, p.5). The question of how many participants to include in the study is defined by the aim and questions of the study. Unlike a quantitative study, where it is important to define the exact number of participants, in a qualitative

study this number is determined by what is discovered during the course of interviewing, as well as by the depth of these interviews. The widely used concept of saturation suggests that interviews continue until no obviously new themes emerge (Baker, 2012). However, this concept is imperfect because usually thematic coding occurs after all interviews are complete. Nevertheless, this concept of saturation, as well as the notion that one can only effectively integrate an in-depth analysis of 20-30 interviews (Baker & Edwards, 2012) helped guide the recruitment of 23 women, including eight Somali women, eight Congolese women, and seven Zimbabwean women. The overall sample is summarized in Table 2. Table 2 also shows the focus group sample, which increased the overall number of participants to 72.

Table 2: Summary of in-depth interviews and focus group discussion sampling

	Congolese		Zimbabwean		Somali		Total (N)
In depth Interviews Criteria: Over 18, Self-identify as Somali, Congolese or Zimbabwean, Pregnant or child under 2	8		7		8		23
Use of interpreter	1		0		4		5
Focus Groups Number of groups, men (M) or women (W)	M	W	M	W	M	W	9
	1	2	1	2	1	2	
Numbers within groups (n) Criteria: Over 18, Self-identify as Somali, Congolese or Zimbabwean.	10	8	5	9	6	10	48
Use of interpreter	0	1	0	0	0	1	2
Total Participants	26		23		23		72

The interviews consisted of a single, one to two-hour interview with recently (less than two years) postpartum women. All interviews were digitally recorded. While I had planned to conduct informed consent (discussed in context of “Ethics”) and establish trust in a separate meeting before the interview date, this was not always appropriate, as women wanted to spend a single morning or afternoon with me rather than have me return another day to conduct the interview. By conducting all the interviews myself, I promoted consistency, managed to use each interview to build on the previous ones. Conducting all fieldwork myself, facilitated a greater depth of analysis because I was not simply reading or listening to interviews, I was simultaneously cobbling together a picture of migrants’ social realities, trying to ask good questions about these social realities, and documenting what I had seen and why.

Focus groups

The literature review suggested that maternal and infant nutrition is shaped by close relationships. Research objective three focused particularly on the dynamics of these relationships; on how maternal

and infant nutrition is discussed in a group setting. As such, focus groups were an appropriate tool for “produc[ing] data and insights that would be less accessible without the *interaction* found in a group” (Ulin et al., 2005, Loc 2628, 29%). They are very useful in discovering “social norms, expectations, beliefs and values” (Ulin et al., 2005, Loc 2628, 29%).

As maternal and infant nutrition encompassed male experience yet was disproportionately a woman’s domain, in each migrant community, I conducted one male-only focus group and two female-only focus groups. Consistent with the goals of the focus group, inclusion criteria were broader, and any individual that identified as a migrant from the specified country could be part of the discussion group. The rationale for segregating by gender was primarily to create a safer space for conversation.

Focus group recruitment for both men and women presented a challenge. I conducted focus groups both during the week and on weekends, in order to include working and non-working migrants. Men tended to be available on Saturdays. The Somali and Zimbabwean men’s groups were conducted at community agencies and included several staff members and connections, including clients and a religious leader. The Congolese men’s group took place at the end of a health workshop, where men had the option to stay and be part of the group.

Focus group recruitment for women’s focus groups were particularly challenging. Somali women were busy with many children, Zimbabwean and Congolese women with work. As such, one Somali and one Congolese women’s group consisted of vendors, and took place during work hours, as there were lulls in business during the day. One Zimbabwean and one Congolese group took place at a women’s shelter. One Zimbabwean group took place in an informal settlement with largely unemployed mothers with young children. One Somali group took place with women leaders and advocates in the community. The focus groups thus reached a fairly broad range of migrants. Focus groups took place primarily in more communal settings, including community centres, shops, and a women’s shelter. Only one focus group- One Zimbabwean women’s group- took place in a home. Focus groups lasted between 45 minutes and two hours.

Theoretically, an ideal focus group has between six and ten individuals, where everyone is able to speak but the moderator is still able to manage the flow of conversation (Larkin, Begley & Devane, 2012). In general, it was logistically very difficult to get sufficient numbers for a group, three groups consisted of only four individuals (Two Congolese women’s group and one Somali women’s group), whereas two groups were associated with broader meetings (one health meeting and one English as a second language class) and I had to reduce the group to ten individuals.

After informed consent, when feasible I asked a short set of five socio-demographic questions before a focus group began, including age, migration background, and education. Informed consent is discussed in the subsequent section on ethics. Thereafter, the focus group began with a general exploratory question, framed somewhat impersonally (Ulin et al., 2005, loc 2801, 31%). The conversation was meant to be between the participants as much as possible. At times, this was hindered by the large (10) or small (4) size of the group. As moderator I took on a role of “non-judgmental” listening and “keeping the discussion focused and moving” (Ulin et al., 2005, loc 2725, 30%).

As the focus group moderator, I asked general questions (Appendix 2) around themes that had emerged

so far as important during in-depth interviews (Appendix 2), and listened for key words or descriptions. Focus group participants had *not* been previously interviewed in the in-depth interviews. I explored some of the same domains of interest as with the in-depth interviews, but devoted particular attention to exploring perceptions of support and the household dynamic that facilitates this support. Much of the success of the focus group depends on the skill of the moderator. Previous to this study, I was trained and had experience moderating focus groups with an interpreter present. My past focus group experience has been with Somali women (Geltman et al., 2013a; Geltman et al., 2013b; Hunter Adams et al., 2013).

As note-taking was likely to interrupt the flow of conversation, all interviews were digitally recorded (Zhang & Wildemuth, 2009). All participants agreed that they were comfortable with this recording once I explained that their name would not be used, the recording would not be replayed for a public audience, and I would only use the recording for this study.

The focus groups therefore helped to give context to the experiences of forced migrant women in relation to male partners and other women in the community. It showed some of the ways that nutrition is discussed in a community group structure. Whereas in-depth interviews focused on women's own experiences, focus groups focused on community norms, values and descriptions of maternal and infant nutrition.

Reflexivity

In qualitative research, rather than attempting to control for bias, the goal is to account for oneself, and be transparent about one's own role with respect to one's findings. Reflexivity refers to this process of examining the researcher's subjectivity. Shaw (2010) explores this notion of reflexivity as way of reflecting your thoughts back on yourself, with the recognition that it is in this process that both you and your subject "create" truth. In this study, I used a research diary to make sense of my own influence, motivations and biases during the research process and make it an integral part of the research (Anfara, Brown & Mangione, 2002). Both the research diary and field notes were included in the thematic analysis, and thoughts were summarised as memos in the transcripts. The field notes helped to build a contextual picture, for example in detailing interview settings such as interruptions, housing conditions or cooking facilities. The research diary was reflective. At various point in the study I confronted my biases. For example, I would write about my role as a researcher in relation to repeated stories of forced sterilizations among migrant communities, and how I navigated these kinds of stories. I was also pregnant or breastfeeding my second child during the period of fieldwork, analysis and writing. As such, I tended to weigh my personal experiences and insights on breastfeeding and complementary feedings- against the experiences of participants. One of my own motivations for the study was my belief in a common bridging experience of motherhood. This helped me to connect to some of the challenges of life with small children, but it also brought with it mutual and disparate assumptions about the maternal period, which veiled topics of discussion. My experience and interpretation of results was enhanced by follow-up conversations with participants and interpreters, and while I did only one official in-depth interview with each person, I continued to interact with interpreters and several participants, and we continued to talk about our common experiences of parenting.

I have also been a migrant for many years in multiple countries, both as a student and as a young

professional and mother, and the similarities and differences between my experience and the-- often very different-- experiences of migrant women in Cape Town were important parts of my reflective process. I have also had struggles with Home Affairs on behalf of my non-South African spouse, and while these pale in comparison to the experiences of many migrant women, I have experienced some of the real barriers that status presents to day-to-day life, and how this might tie into issues of nutrition. I considered this experience- of motherhood and migration- as opportunities for reflection and follow-up questions. Rather than being focused on bias-which implies there is one correct perspective, qualitative studies are focused on methodological transparency (Shaw, 2010). As such, I try to be as clear as possible on the ways that information was gathered and framed. Using personal pronouns also helps to reveal my role as the researcher.

My academic training and work experience was also important to this study. Prior to conducting the study, I had studied African history and forced migration, and worked in the U.S. refugee resettlement context for close to a decade. Thus I was familiar with the politics and programming around migration- and particularly forced migration- and this facilitated a deeper understanding of how and why women migrate. This familiarity was positive overall, but at times it meant that I was quick to label dynamics that I thought I understood, particularly in the Somali context. However, the context of Somalis in Cape Town is very different than that of Somalis in Massachusetts, USA. My experience with relatively close-knit populations in Massachusetts was contrasted with the Zimbabwean and Congolese contexts, who were much less likely to describe themselves as a “community”. Much of this study’s methodology is premised on the importance of understanding how people understand and describe themselves and their experiences, and so engaging in some of the complexities of how one comes to describe oneself a certain way- to a certain researcher- is a very important part of bringing the findings of the study to life in meaningful ways.

Language interpretation

Interpretation, the facilitation of language communication between users of different languages, presented a challenge to the quality of the study. There is general consensus in the literature that a rigorous qualitative study can, with certain caveats, include interpretation and retain participants’ perspectives (Squires, 2009). The study used Squires’ (2009) broad methodological recommendations for qualitative cross-language studies, with some additional considerations given the nature of this study. The limitations of working across the various migrant languages (i.e. Somali, Lingala, Swahili and French) are noted, as are the ways that I addressed these limitations in both methodology and analysis (Squires, 2009).

I conducted all interviews- whether in English or in another language- and was therefore able to consistently reflect on the strengths and weaknesses of interviews with and without the presence of an interpreter. All interviews in this study were conducted in English where possible, with the exception of participants who preferred to speak in French, Lingala, Swahili or Somali. Of the 32 interviews and focus groups, I worked with an interpreter for five of the interviews and two of the focus groups and in total I worked with four interpreters. Interpreter one interpreted for one interview (Lingala/French) and facilitated for 4, interpreter two interpreted for four interviews (Somali), and interpreter three interpreted for one Congolese women’s focus group (Swahili, Lingala, French), and interpreter four interpreted for one Somali women’s focus group.

Issues of interpretation applied to about a third of the total sample, though issues of language applied to all interactions, as English was almost always participants' second language. The process of identifying and working with an interpreter was very important to the overall quality of the study. Interpreters were community leaders or established professional interpreters, and were selected because of their connections to other migrants, and because they seemed to be trusted intermediaries. However, as advocates within their communities, the interpreters were also very interested in addressing problems in their communities, and I had to make the limitations of my role clear. I met with each interpreter before conducting an interview in order to establish a relationship and make their role and the scope of the interview clear. I also spent time debriefing and take notes on the interpreter's impressions after the interview was complete.

While I had not previously conducted in-depth interviews with an interpreter present, I had previously observed and taken notes during eighty interpreter-mediated interviews with Somali participants, and discussed the role of the interpreter at length in this context. In the Congolese community because of the presence of multiple languages and the specificity of those languages to Congo (that is, Congolese Lingala, French, and Swahili are not necessarily interchangeable with the Lingala, French, and Swahili spoken in other countries), it was important to have a Congolese interpreter, but the interpreter I initially worked with was not sufficiently bilingual to interpret seamlessly. Therefore, she interpreted one interview, and acted as a facilitator in four subsequent interviews, where I spoke directly with the participant in English, but she was present to put the participant at ease and facilitate if the subject could not adequately communicate at any point in the interview. A second interpreter had health care training, and was effective in conveying both language and meaning, and interpreted segments of one Congolese women's focus group. The majority of Congolese participants communicated effectively in English.

Within the Somali community, I worked with one male and one female interpreter. Both the male and female interpreter had experience interpreting in healthcare contexts. The male interpreter was a leader in a Somali organisation whereas the female interpreter was a court interpreter. The male interpreter was selected because he is well known and trusted within the community. I was careful only to work with the male interpreter in situations where a participant's context specifically allowed her to speak with a man. It helped that, as a female interviewer, at no moment was the interviewee alone with a male interpreter. Working with a male interpreter at times allowed for insights that might otherwise have been missed, as fewer assumptions of common knowledge were made. South African does not have formal standards of interpretation or clear interpreter training, where one is considered "trained" at the end of a course. I based my assessment of interpreters on their language competence as compared to previous Somali interpreters I had worked with.

While debates around the appropriate role of interpreters in qualitative interviews is on-going, there is growing consensus that negotiating and discussing- rather than "controlling" for the influence of interpreters- offers more transparent and mutually desirable results (Squires, 2009), (Hsieh, 2010). I documented interpreters' community roles and took detailed notes on how their roles and personalities may affect the structure of the interview (Shimpuku & Norr, 2012). The act of transforming a spoken interview to written text is also particularly important in the context of interviews and focus groups that take place

across language, and will be discussed in the Analysis section of this chapter.

Quality control

For all Congolese and Somali interviews where an interviewer or facilitator had been present, a Congolese and Somali bilingual professional reviewed the transcripts and audio remotely, checked the quality of interpretation where applicable, and helped to provide context for some statements. These two research assistants, V.K. and N.A. are resettled refugees in the United States, and in addition to picking up errors in interpretation, they provided an important perspective. They also helped present new insights on the context of migrants in Cape Town, as compared to life in their home countries of Somalia and Congo, and in comparison to their experiences in the United States.

It should be noted that all interviews in this study were either conducted in English, or in English + another language. In this light, Brislin's (1970) model of translation and back translation, which requires a level of bilingual literacy that is extremely expensive was unnecessary. Rather, research assistants checked the quality of oral interpretation, which requires proficient bilingual skills, but does not require commensurate writing and transcription skills. Furthermore, professional transcription of English (including see below), where the quality of interpretation was checked and validated, allowed for the creation of high-quality transcripts (Hunter-Adams, et al. 2013).

Transcription

The generation of transcripts involved multiple steps, carefully undertaken to enhance the study's rigour (Lincoln & Guba, 1985). In order to begin immersion in the data, I transcribed approximately half of the interviews and focus groups verbatim. The other interviews and focus groups were transcribed professionally by South Africans. To promote consistency between transcripts, I listened to and edited all transcripts after I received the professionally produced transcripts.

Bilingual interviews were recorded and only the English portion transcribed. In these cases, the transcripts were checked by a bilingual Congolese or Somali professional who was familiar with research, and able to annotate the transcript with notes on interpretation, non-English discussion that was not interpreted, etc. These insights were pivotal to contextualising and adding depth to the interview, and to validating the interpretation (Squires, 2009). Initial transcriptions included fillers such as "ums" and "aahs", as well as exclamations and laughter. However, quotations that include non-language fillers or grammatical errors that reflect the language of the interpreter rather than the participant were edited, as these grammatical errors did not necessarily convey the voice of the participant.

Data analysis

Data collection and the transformation of audio recordings into text marked the beginning of the analytic process. In contrast to quantitative studies that identify or control for contextual variables, qualitative studies attempt to explore these variables, and see how these contexts interact with the people being

researched (Ulin et al., 2005; Loc 3894, 43%). On-going analysis thus takes place throughout the research process, in the form of a research diary, notes, and reflections. This section will describe the process of thematic analysis, which involved identifying themes and categories within and across data (Braun, 2006; Fereday & Muir-Cochrane, 2006). Both the in-depth interviews and the focus groups were analysed using thematic analysis, but the analysis took place in stages and spoke to slightly different research objectives.

Thematic analysis has several defined steps that help to strengthen the findings and make the process of data analysis more transparent (Braun, 2006). Thematic analysis began with immersion in the data through thorough reading of the transcripts multiple times, taking notes and identifying dominant themes, and how themes and subthemes connected with one another. This immersion allowed for inductive coding, where themes emerge from the data (Boyatzis, 1998). The themes were coded into categories so that themes could be compared. Such an inductive approach resembles grounded theory. In the constructionist tradition, coding is a process of fixing meaning and contextualising the transcripts (Crabtree & Miller, 1999). Inductive coding served as starting point for the analysis, with its goal is to allow the transcripts, and ultimately the participants, to speak for themselves.

More deductive, a priori coding formed the second layer of thematic analysis (Crabtree & Miller, 1999). That is, I produced codes using the themes that were initially set forth as important during the literature review. There were inevitable similarities between deductive and inductive codes. By beginning with inductive codes, the language and perspective of the participant was favoured, and the context of their stories and responses also weighed. Given the length and number of transcripts for analysis, much of the context was presented through memos, added primarily from the research diary and field notes.

After developing and defining an initial set of codes, I began to code transcripts and test the validity of the codes and the extent to which they seemed to convey the meanings and understandings presented by participants. Fereday & Muir-Cochrane describe the process of thematic analysis as an “iterative and reflexive process” (p.83), which resonated with my experience of coding. Over time, I attempted to produce definitions that were clear and concise. I also needed to produce codes that were broad enough to be easily identifiable in texts, and to produce a codebook—or set of codes—that was small enough to be memorised and used with relative fluency. Once no new categories of codes appeared, the codebook was considered complete and coding of all transcripts- both in-depth interviews and focus groups- were coded using the complete codebook. All transcripts were uploaded to the computer software *Hyperresearch* (Researchware Inc., 2009, Massachusetts, U.S.A.), to assist with coding, sorting, and data management. *Hyperresearch* is a coding software in which verbatim English transcripts are uploaded, and codes and code definitions inputted by the researcher. It is a tool for organizing and making sense of data that cannot be meaningfully analysed using more statistical approaches. From this point, text that was coded according to a specific theme can be extracted and examined. This allows for the closer examination of specific themes. The coding software does not replace immersion in the data, but helps to sort and make sense of codes.

From a theoretical perspective, thematic analysis can either focus on either the semantic, or explicit level, or at the latent, or interpretive level (Boyatzis, 1998). This study adopted the goal of exploring latent themes. After coding, my task, adopting a social constructionist viewpoint (Burr, 2003), was not to present narratives

as truth, but to examine the ways that they related to participants' experiences and relationships. That is, women's poor experience in a hospital might mean multiple things, and the goal of the analysis was to explore these multiple factors, rather than take them purely at face value.

Lincoln and Guba's (1985) concept of dependability- which was later built into the concept of "authenticity" in this research- provided guidance on the extent to which findings are consistent and a fair representation of the data that is collected. Coding, as well as the use of two qualitative methods (in-depth interviews and focus groups) provided avenues to reflect on the dependability of the final conclusions of the study. Inductive coding provided a framework to check that, for example, I was not forcing the narratives into my own predetermined notions. Using two methods (in-depth interviews and focus groups) allowed for multiple ways of looking at the research questions as well as explaining and justifying these vantage points. In order to gain additional vantage points, I sought input from supervisors and external colleagues in the fields of migration and maternal health. Meetings and conferences also helped to contextualise the findings within the broader state of the field of study. In qualitative research, it is argued that dependability is not established by concluding the study with one answer to the key questions. In this study, dependability was established by attempting to fairly represent and reflect women's stories, and by reflecting on how these stories shed light on the key dissertation questions.

The transformation of results to the narrative described in Chapters 4-6, took several steps. At first, the results consisted of large sections of coded quotes as well as fairly brief analysis of the quotes- a "thin description". At this point, focus group discussion and interview data were distinct. I continued to analyse the data, the interrelationships between themes, their subtext and context emerged more clearer- I began to have what resembled a "thick description" (Ponterotto, 2006)¹⁶. At this interpretive stage, the focus group data and in-depth interview data were integrated, partly for practical reasons of length, and partly because they were complementary to this task of providing a secondary level interpretation of the experiences under specific themes.

Ethics

Ethical approval to conduct the study was obtained from the Research Ethics Committee, Faculty of Health Sciences, University of Cape Town (HREC REF 009/2013). The ethical concerns presented by interviewing a vulnerable population include "anxiety and distress, exploitation, misrepresentation, and identification of participant in published papers" (Richards & Schwartz, 2002, p.135). The risk of misrepresentation is minimised by a rigorous transcription process, as well as by thematic analysis that included inductive coding, described in the previous sections. The themes of exploitation, anxiety and distress, and identification in published papers, are included in this section, as framed by informed consent, anonymity, and confidentiality.

Informed consent process

The informed consent process was central to confidentiality and anonymity. Obtaining voluntary informed

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16 While a "thick description" evades a simple definition, it is made "thick" by interpretation of the meanings and understandings involved, rather than necessarily by descriptive detail.

consent is central to ethical research, where participants are made “fully aware what they are agreeing to”, as well as their rights to not participate or withdraw (Ellis, Kia-Keating, Yusef, Lincoln & Nur, 2007). By conducting the interview in a private space and discussing the goals of the study in a private setting, to reduce pressure to participate and confidentiality. Secondly, written informed consent (Appendix 3 and 4) was read aloud to all participants at the start of the interview or focus group. Informed consent included an outline of the purpose of the research, risks and benefits, and the opportunity to opt out before or during the interview. Individuals who were unable to read and write placed an X to mark their consent. This process is not without challenges. As Leaning (2001) writes of the of doing research in refugee populations, the ability to obtain informed consent given language barriers and differences in cultural norms, as well as lack of familiarity with research. Moreover, Ellis et al. writes that, for refugees coming from countries where governments use coercive tactics and violate human rights, a refugee experience may be that an “official will stop at nothing to get a person to cooperate” (Ellis, et al. 2004; p468). Moreover, the practice of obtaining written informed consent from participants from oral cultures, or who cannot read or write, and “the presentation of a multipage written document may be irrelevant, inscrutable, or perceived as intimidating” (Ellis, et al. 2004; p469). Ellis et al. suggests that the consent of community leaders may offer some reassurance to potential participants (Ellis, et al. 2004).

Meeting with community leaders therefore formed part of the effort to share information about the study more widely and provide an environment that promoted informed consent. The written informed consent document also shared how the study would maintain confidentiality, and affirmed the commitment for the interview to take place in a private room in which the interviewed subject is comfortable, and to move location if I was unable to maintain the privacy of the room. The informed consent emphasized that information would not be used against them, or their status in South Africa. It affirmed that the interpreter, where present, would maintain confidentiality.

While in the in-depth interviews I was able to affirm that confidentiality will be maintained, in the focus group informed consent cannot be guaranteed due to the presence of other members of the group. However, the informed consent included the request to maintain the confidentiality of the group, as well as my commitment to confidentiality through the blinding of transcripts.

Participants had the opportunity to opt out after the informed consent was read. One Somali woman, (mentioned earlier in the section on recruitment) opted out, possibly because she was concerned about signing a document. I checked if participants understood the study by asking questions at several points in the informed consent process. For example, did they consent to the interview being recorded? Did they understand the topic? Did they understand that all identifying information would be removed? Did they feel that the interview room was private and comfortable? At the end of the study, did they understand that papers would be written describing their experiences?

Confidentiality was usually maintained by securing a private room, and I ensured that the participant was comfortable with the level of privacy before proceeding. The subject matter was not highly sensitive, and I took care not to presume to ask questions that I felt required a more intimate relationship with the interviewee. In participant homes, privacy was sometimes difficult to organize, so I would check with

participants to find a mutually appropriate space. For example, if a participant preferred to interview at home, and the interview was of high quality despite the presence of children, the interview notes reflected on the children's role without diminishing the validity of the interview. When the flow of the interview was disrupted by adults or children coming into or out of the room, the interview was paused and restarted when the participant was ready. Rather than being viewed negatively, I thought of this as a welcome pause to take stock of how the interview was going, notice what was going on around me, and prepare myself for the next phase of the interview.

All data was kept on a password protected hard drive. Professional transcription and transcript checking was conducted by individuals external to the study who signed confidentiality agreements, and deleted their copy of audio recordings after transcription was completed. The transcripts were blinded of identifying information before being imported into *Hyperresearch*.

Compensation

Participants received R50 (US\$5) to pay for transportation costs and the potential loss of income associated with spending an hour for the interview. Informed consent explained this reimbursement, and that being part of the study would not provide any other direct benefits.

Referrals in crisis or in response to medical needs

While I was prepared to respond with referral to cases of acute medical need (e.g, depression), abuse, or cases of rape, no such cases emerged. However, participants occasionally raised issues related to immigration status and xenophobia in the interview setting, and I referred participants to relevant community services.

Strengths and limitations of the study methodology

The study reached three relatively hard-to-reach migrant populations. By spreading its focus to three communities, the study sacrificed depth of analysis, and limited time was spent with each community. However, it allowed for a more relevant and transferable reflection on the experiences, meanings and understandings of migrants in Cape Town. That is, the common experience of migration was brought into focus by the inclusion of three, quite different, groups of participants. Rampant xenophobia in South Africa amplifies the common experience of migration.

There were trade-offs to working with an interpreter, on the one hand, or favouring English-speaking migrants, on the other. Working with an interpreter potentially sacrifices some of the richness of meaning in participant responses. In selecting English speaking participants, one chooses a limited sample who may be distinctive. In particular, they may have more formal education. Zimbabwean and Congolese migrants tended to speak English, making it more logical to favour English speakers. For Somali women, where the difference between English and non-English speakers was more stark, I recruited a mix of English and non-English speaking participants.

While the study was concerned with maternal and infant nutrition in the context of migration, it was not a comparative or longitudinal study. It did not sample non-migrants in Zimbabwe, Congo, and Somalia. As

such, the ways in which migrants' ways of knowing are foregrounded is important. Migrants' sense of loss around foods or social support may not be unique to cross-border migrants- their loss may be a loss that is also felt in rural to urban migrants, or it may be a universal loss in the context of globalization. The goal of the qualitative methods are important to reiterate; rather than determining or measuring relationships between nutrition and migration, the purpose of the study was to understand how migrants conceptualise and make meaning around their choices. Thus the question was not so much whether a migrants' sense of loss was unique or whether migrants breastfed more or less than before, it was how migrants framed their choices and conceptualised their nutrition as pregnant women and carers of young children.

Conclusion

This chapter presented the research methodology used in the collection of the study data. The use of qualitative research, and the constructionist perspective on research, was explored. The data collection process, including the study setting, population, interpretation and transcription were discussed. Data analysis- immersion, identification of themes, and inductive and deductive coding, were also discussed. My role as the researcher, as well as the strengths and limitations of the study were presented. Chapters 4-6 will present and discuss the study findings.

Chapter 4: Results- Food, migration, and longing in the context of pregnancy

Introduction

In the literature review (Chapter 2), nutrition during pregnancy was situated in relation to the impact of maternal nutrition on the morbidity and mortality of mothers and infants. Poor nutrition is a cause of preventable maternal and infant death. However, previous to this study it was not clear how migrants in Cape Town considered the role of maternal nutrition in relation to either their own or their infants' health. It was not apparent whether migrants in LMIC would be primarily concerned with short-term morbidity and mortality, or with long-term health. Migrant participants originated from countries with relatively high maternal and infant mortality. Unlike South Africa or Africa as a whole, Cape Town has a relatively low maternal mortality rate of six per 100,000 people in 2012 (Massyn et al., 2013). Cape Town has characteristics of both HIC (e.g. relatively good access to antenatal care) and LMIC (e.g. very poor housing). Exploring participants' perception of maternal nutrition helped connect their nutritional history (e.g. scarcity of specific foods, drought or famine), and food beliefs of home, to more recent experiences of nutrition during pregnancy in Cape Town. Analysing these connections reveals migrants' potential health vulnerabilities and resiliencies in relation to nutrition.

In this chapter I discuss the empirical research findings' of Cape Town migrant women and men's understanding of nutrition which, while rooted in a discussion of nutrition during pregnancy, often evolved into a broader discussion encompassing longing, loss, and general food experiences. I detail central themes revolving around nutrition during pregnancy and discuss how these themes relate to previous research:

- **Part 1:** Nutrition for participants was framed by a sense of longing for the “traditional” foods of home.
- **Part 2:** Nutrition was framed in terms of participants' experiences of new food environment, that is, in terms of the foods accessible to and consumed by migrants in Cape Town.
- **Part 3:** The first two themes of loss and longing over the past food environment (in countries of origin), and adjustment to the new food environment (in Cape Town) aid in understanding participants' perceptions of the relationship between their nutrition and health.

In conclusion, I argue that the generalized experience of stress, loss and longing in an increasingly industrialized food environment shaped maternal nutrition. Food may be central to health inequity in contexts where food supply is quickly changing, as for migrants. I conclude that the themes included in this chapter offer insights into the way that poverty and health inequalities are related via nutrition, and as such motivate for a public health policy emphasis on the urban food supply as a driver of health inequality in migrant populations.

Part 1: Food, migration and longing

Craving “traditional” foods during pregnancy

People use the word “traditional” to name what they are used to. This word allows us to avoid thinking about how, when and why our patterns of work, trade and family life came to be. When we think of something as “traditional,” we make it seem natural or divine rather than historical. But everything has origins and causes... every “tradition” was once constructed.

(Friedman, 1999, p.36)

When asked general questions about nutrition during pregnancy, many participants began by describing their cravings for “traditional” foods.¹⁷ These descriptions served as a window into both diet and participants’ longing for home. That is, cravings are biocultural (Young & Pike, 2012) origins of cravings¹⁸, where a desire for food is rooted in both what is socially constructed as “normal” as well as in the physical experience of pregnancy. Migrants consistently longed for the foods of home, and seldom explicitly spoke of health when discussing cravings. The language used by participants, as well as the silences therein, became a window into perceptions and approaches to nutrition and health.

Cravings for “traditional” food were often synonymous with longings for home. Participants’ cravings for traditional foods during pregnancy accentuated the differences between food in Cape Town and food from “home”. Participants of all three nationalities frequently used the term “traditional” to refer to these foods. I refer to “tradition” with quotation marks because, as Friedman (1999) described, conceptions of “tradition” change. The foods that were included and excluded in this category of “tradition” hinted at the comfort of familiar foods during pregnancy, particularly during the first trimester. Congolese and Zimbabwean women generally emphasized their desire for leafy greens, often dried or otherwise preserved, ground nuts, and dried fish that were not generally consumed by populations in Cape Town and were understood as distinctively “Congolese” or “Zimbabwean”, but *not* “South African”: This is illustrated from the interview text with a Congolese and Zimbabwean woman:

R: It’s hard to crave food from home. With no food... I think there is no better food than food from home. So normally we crave for mfushwa... that’s dried vegetables... and... Luckily for me my mother-in-law always comes in and out, so...

I: *She brings?*

R: Ja, she brings me the stuff from home so it’s mfushwa...It’s mawuyu from [the] baobab tree.

27-year-old Zimbabwean mother of 2, 17Z¹⁹

17 The term “traditional” food tends to refer specifically to foods that are seen as culturally specific, or non-Western. More broadly, the notion of a geographically or family-specific “food tradition” is used to consider the broader patterns in which foods are prepared and consumed in the household. This chapter grapples with both cravings for “traditional” foods as well as “food traditions”, more broadly.

18 By definition, cravings are longings: “A[n] intense desire or urge to eat a specific food” (Patil & Young, 2012, p.366).

19 Participants are referred to by age, parity, and country of origin. For in-depth interviews, the participant code is rep-

The spinach and the cabbage, all veg like that. But sometimes we buy some veg from Congo, yes, Pondu, Matembele, Ngaingai. [different preserved leafy vegetables] when you eat the Ngaingai [sour preserved vegetables]. When you the ngaingai, you feel fine!

27-year-old Congolese mother of 1, 4C

While “pap”—or thick maize meal porridge—is the common staple food shared by black South Africans, Zimbabweans and Congolese, Pap was only occasionally included as a “traditional” food, and migrants used the South African term- ‘pap’:

...During the first three months I only ate traditional food...I didn't want any meat, anything. It was pap and okra or pap and...The pumpkin leaves.

31-year-old Zimbabwean mother of 3, 18Z

Even when participants' accessed the “traditional” food that they desired, the act of food preparation still seemed to reflect alienation. Participants from Congo and Zimbabwe bought dried vegetables that originated in Congo, Zimbabwe or Mozambique. The dried greens were already dried and ready to use in cooking. Whereas at home, women spoke of their mothers preserving greens, fish and mopane worms for future consumption, this connection was severed by migration, and women usually relied on traders to bring the foods from their countries of origin. Moreover, in the inner city, “traditional” food preparation- usually more labour-intensive and starting with less processed foods- for Congolese and Zimbabwean women was very difficult. Thus participants faced barriers to accessing and affording ingredients, finding kitchen space to prepare food, and finding time to prepare meals. These barriers were not necessarily unique to Cape Town or to cross-border migrants. Rather, they reflected the constraints presented by urban life for migrant Africans of low socioeconomic status. The challenges women faced in accessing and preparing “traditional” foods represent an important lens on the ways that food traditions are transformed and eroded in a migrant context.

For Somali women in particular, “freshness” was central to their craving; they did not necessarily focus on the ways that foods were culturally or geographically specific. Women described their craving for fresh mango as often and as strongly as their craving for camel liver:

I: Are there any foods that women in Somalia always eat when they're pregnant?

R: Yeah the liver, Somali has good fruit and fresh... fruit and veg...

[...]I. Did you get to have liver during your pregnancies?

R: No... because everything... the liver here is different... It's not fresh.

28-year-old Somali mother of 5, pregnant, 8S (Interpreter present)

For Somalis, the importance of freshness meant that even when foods were imported from Somalia, they

resented by a number between one and 23, followed by a letter to indicate community (S=Somali, C=Congolese, and Z=Zimbabwean) Focus groups are denoted by FG, followed by a number, a letter to indicate community, and an M or W to indicate men's and women's groups. R: refers to respondent, while I: refers to interviewer.

still fell far short of an imagined ideal, because the freshness of the food was as important as the food itself. Thus while camel liver is imported at great expense, to South Africa, it could never become the camel liver of a freshly slaughtered animal. Nor could it embody the celebration involved in collectively cooking and eating together. The food consumed during pregnancy seemed to accentuate participants' sense of their status as outsiders. They relayed longing for the "freshness" and "wildness" of foods they foraged or bought from vendors.

When women referred to cravings for food from home, they were not only referring to food that is unavailable here. For example, peanut butter is available in South Africa yet was described as a traditional "Zimbabwean" food that women missed during pregnancy. Participants were also referring to the quality of foods, which may invoke not only the food itself, but the sense of longing associated with migration (de Vryer, 1989). In her study of El Salvadoran immigrants in Massachusetts, Stowers (2012) described this "gastronomic nostalgia" as "really the mourning for the impossibility of regaining the past" (p.388). The gastronomic nostalgia women experienced revealed the ways they identified "home" as the place they had left, and cravings became a tangible expression of homesickness during pregnancy. Past studies have explored the importance of food for immigrants in a new place (Ziegelman, 2011), and in the U.S. literature, long after someone identifies as "American", they retain a preference for foods from their country of origin. Thus food is one of the ways that identity is retained, renewed and re-asserted, particularly for migrants (ibid.).

Yet unlike Stowers' (2012) study of migrants in the United States, pregnant migrant women in Cape Town often felt unable to actualise their longings. Rather, they expressed a sense of resignation over being unable to access the foods they craved. Also unlike Stowers' study, where women were able to remake culture through food, the cultural differences between South African and migrants' most comforting foods were not clear-cut. While for all migrants food was represented by both male and female participants as the traditional domain of women, in Cape Town many migrant women seemed dependent on men for accessing and paying for ingredients. Women in this study did not describe food preparation as a big part of their lives, during pregnancy or otherwise. Whereas at home food preparation was described as occupying an important and affirming role, in Cape Town women could not settle into these familiar roles. It is also in this context that women largely described themselves as too caught up with daily survival to concern themselves with food preparation. As such, longings for foods seemed to represent a broader yearning for the familiar patterns of daily life in migrants' countries of origin.

Geophagy: An example of longing for home

Migrants' longing for traditional foods is illustrated in Zimbabwean and Congolese women's consumption of clay soil.²⁰ Previous studies of clay eating, or geophagy, among pregnant women in sub-Saharan Africa indicate that the practice is highly prevalent (Njiru, Elchalal & Paltiel, 2011) and socially acceptable in many parts of Africa. In a South African context, it is known that clay consumption is common and socially

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²⁰ *Geophagia* refers specifically to the consumption of earth, and is one form of the broader category of *pica*, which is defined as the ingestion of non-food items.

acceptable among Xhosa women in South Africa (Meel, 2012; George & Ndip, 2011), and likely, by extension, among other black South African ethnicities. In this study, consumption of clay soil was a central way that Zimbabwean and Congolese women reaffirmed their cultural identity during their pregnancies in Cape Town.

There are several medical reasons why geophagia may be of concern, particularly during pregnancy. While medical professionals express concern that the clay could contain parasites- particularly geohelminths (e.g. hookworm) (Njiru et al., 2011), this has not been consistently borne out in the literature (Kawai, Saathoff, Antelman, Msamanga & Fawzi, 2009; Kutalek et al., 2010); rather, heavy metals (lead, mercury and cadmium) and microbes present the main concerns for the consumption of clay soil (Kutalek et al., 2010). In particular, heavy metals are damaging to foetal neurological development (Lambert et al., 2013). In the United States, migrant women have shown elevated lead levels that could potentially affect their growing foetus during pregnancy, though a causal link to geophagy was not established (Alba, Carleton, Dinkel & Ruppe, 2012; Shannon, 2003).

A previous study categorised three possible biological hypotheses for clay soil consumption: 1) As a response to hunger 2) To respond to micronutrient deficiencies and 3) To protect against harmful plant chemicals or microbes (Young & Pike, 2012). One large mixed methods study of geophagic soil and geophagia in Tanzania found that of the three potential hypotheses for understanding geophagia in Tanzania, the argument for rocks being “food” or supplying micronutrients was not supported. Rather, it appeared that high kaolin potentially protected the digestive system from harmful microbes (Young et al., 2010). There is some limited support in the literature for the notion that clay-eating is related to a historical lack of necessary micronutrients (Njiru et al., 2011; Reid, 1992), for example, women with anaemia are more likely to consume soil (Kutalek et al., 2010). However, the consumption of clay soil may actually make the anaemia worse, as it decreases the bioavailability of micronutrients, including iron (Kawai et al., 2009; Lambert et al., 2013). Moreover, geophagic soils that have been tested for mineral content were actually low in iron and calcium (Young, 2010).

Amongst Somali participants, geophagy was presented as a practice of “uneducated women” (FG1SM). No Somali participants claimed to eat soil or clay. Somali men began to discuss the practice without prompting, whereas Somali women in the focus group or interview settings did not. While possibly previously common in Somalia, it seemed that it had become less so and while I cannot be certain that women did not consume clay soil, this did not seem to be a craving that was important to Somali women in Cape Town during pregnancy.

However, the consumption of clay stones or soil - *pemba* or *matlapa*, respectively, was important to Congolese and Zimbabwean women, as indicated by their bringing up the topic without direct questioning. In one Zimbabwean focus group, a participant said that “all” pregnant women consume clay (FG8ZW). While not all Zimbabwean and Congolese women mentioned consuming clay soil, it was mentioned as an important craving in all four Congolese and Zimbabwean focus groups, as well as in several in-depth interviews.

For Congolese and Zimbabwean women in this study, eating soil was primarily framed by “culture” and craving. This is affirmed by the fact that women were more likely to discuss it in focus group discussions,

where it could be argued- since I only included women from one nationality in a focus group- that they believed I was interested in cravings that were “culturally” conceived. Clay rocks are widely available in Congolese, Rwandan, and Nigerian-owned shops in Cape Town with one rock generally costing R5 (.50 US\$). Women mimicked nibbling on the rock rather than eating large portions at a time (FG8ZW). While some participants from both Congo and Zimbabwe described consumption of the rock as potentially dangerous or unhealthy, they ate it anyway in the context of “habit”, “craving” or a sense of being “satisfied” or “comfortable” after consumption:

R: Umm mm. because you feel it. Sometimes I feel I eat this ground.

I: *You ate those stones.*

R: Yes. It's not healthy for the baby but you have that feeling...

I: *... To eat it... and it helps?*

R: When you eat it you feel comfortable... you feel full you feel good.

40-year-old Congolese mother of 6, 13C

I: *Why did you decide to have it?*

R1: You don't decide! [Laughter, agreement] It's a craving! [Laughter] [...]

I: *Do you think it has something in it that will help? You or the baby?*

R2: It's just for my appetite.

Zimbabwean Women's Focus Group, FG8ZW

According to Congolese and Zimbabwean respondents, it was expected that a woman should at least try clay soil, even if they didn't explicitly crave it. There seemed to be significant social pressure to desire clay during pregnancy, affirming one's cultural identity. Women did not describe refusing the stone because of health risks, but because of personal preference:

R: The mbemba [stone] ...what what what, other people eat that stone.

I: *And you ate that?*

R: No. I was trying but I didn't like.

26-year-old Congolese mother of 1, 5C

Indeed, the literature supports the notion that geophagy is connected to beliefs about fertility and reproduction across much of Africa, and that it has strong cultural roots (Geissler et al., 1999).

The only complication that women raised as motivation to temporarily stop eating clay soil was in the case of significant constipation, which is consistent with the literature that found samples of clay to be uniformly high in kaolin (Young, 2010), which is used as a simple anti-diarrhoeal medicine in pharmacies, including pharmacies in Cape Town. Some women framed the consumption of the soil in terms of the perceived nutritional content of the soil- either calcium or iron:

I: Did you eat the stones when you were pregnant? You mentioned that you craved them but did you actually eat them?

R: Yes... I used to buy it...to buy at the store from Nigeria.

I: Oh! What is it supposed to have in it that makes you stronger?

R: Calcium... do you know calcium?

I: Why do you think Congolese women and Nigerian women eat that stone, but South African women don't?

R: Le Habitude! It's the habit.

30-year-old Congolese mother of 2, 1C

While many of the other potential risks associated with clay soil consumption are somewhat distant or abstract to participants—anaemia and damage to the foetus' neurological development (Patil & Young 2012; Young & Pike 2012)—severe constipation was tangible and required immediate attention. Thus geophagia appeared to be illustrative of a broader migrant nutrition narrative: Since health tended to be described in terms of cravings and how one felt in the present, generalisations about the dangers of clay soil seemed abstract, understood in vague terms that were not compelling to women who did not feel any immediate ill-effects. Rather, women were generally confident of their preferences:

R: Ja! [everyone] it's common!

R1: But me I didn't like it. From the first... born... to this one, I didn't want.

R2: Aaah, me, I eat a lot. And I still remember one day I wake up, it was twelve o'clock. I wake up my husband... I say "Go and get me this!" [laughter] and he got me it! That late! I like it.

Zimbabwean Women's Focus Group, FG8ZW

More broadly, culturally specific cravings were not expressed by respondents in terms of health, even in cases where participants recognised health risks, as was the case of consuming clay soil. An experienced mother of four (R1, FG8ZW) expressed not eating the stone- but she framed this choice as a personal preference rather than a health decision. The second respondent (R2, FG8ZW) in the above quote was a very young mother who had left Zimbabwe as a teenager, and it seemed important to her to describe her preference for the stone as an affirmation of her commonality with the other women in the focus group.

The continued consumption of clay soil was a relatively easy craving to satiate as compared to many traditional foods, which were either expensive, required a lot of preparation, or were difficult to find in Cape Town. For migrant women who did not have adequate access to kitchens in which to prepare traditional foods, or who did not have money to buy expensive traditional foods, continued consumption of clay soil affirmed their ties to home while requiring relatively little investment of time or money.

The value of "traditional" food in maternal and infant health

The descriptions of "traditional" foods were dominated by mentions of clay soil, dried leafy greens, dried

fish, wild foods and additionally, for Somali women, camel and goat meat and milk. With some exceptions, the foods that are described by women might be broadly categorised as “healthy”. In these terms, “traditional” seemed synonymous with health. Indeed, within the field of nutrition is a growing body of literature that elevates the status of traditional diets, drawing parallels between the increasingly westernized, processed global diet and the increasing global prevalence of chronic disease (Pollan, 2008).

Rather than elevating or romanticizing “food traditions” as necessarily healthy, it is helpful to highlight the strong food traditions of migrant-producing countries like Somalia, Congo and Zimbabwe, and draw out the ways that these may convey resilience. Where strong food traditions exist, food is more likely to be prepared from scratch, which is both healthier and cheaper (Pollan, 2008). Food traditions themselves are a potentially strong force of cohesion and health for migrants- in conveying the ability to cook and in bringing potentially isolated and fragmented families together. It was common for respondents to emphasize that despite the busy-ness of life in Cape Town, theirs was a strong domestic tradition:

They [South Africans] want to eat out, after work they buy some KFC or something... but for us, we know how to cook, when we get married and then we know how to run the house, we know how to cook ...Because in my country, it's not 50/50! There's no today the wife cooks, tomorrow it will be him, no! The wife is supposed to cook every day [exclamation of agreement from interpreter] not the husband. She must look after the kids, look after everything. [...] We watched our mothers. We saw she woke up early in the morning so that she can cook something, so when she come back, already pap. So me I think about that when I'm working.

29-year-old Congolese mother of 1, 4C

[taking care of home, cooking] was part of our life. No-one taught me, but I know.[....] It is the mother who teaches her daughter how to care for the house, how to [cook] Still I don't have a mother ... my mother pass away when I was young... my aunts were as the mother, and [I] was taught by the time and circumstance. When Somali mothers are at home, they teach them [girls]. Even my little girl, she goes shopping with me. My four years [old] daughter, has already started to know the life of the house. So she is buying something, for shopping... She always take care of her brothers ... so... that's our life..

28-year-old Somali mother of 5, pregnant, 8S (Interpreter present)

The quotes above illustrate gender dynamics and the ways that participants understood food traditions as “women’s work”. They also reveal the theme of pride over ownership of the domestic domain, where passing on strong domestic traditions seemed to be an attempt to preserve and translate family identity in a new place.

Women’s longing for specific “traditional” foods during pregnancy was an important factor in shaping maternal nutrition. They revealed the ways that their identity remained rooted in home. Moreover, while not stagnant, notions of ‘home’ encompassed strong food traditions passed down from generation to generation of women. Yet these “traditions” were threatened by lack of space, time, money, and access to “traditional” foods. The next section will explore the sentiment that one “can’t eat healthy here”, and its potential implications for maternal and infant health, as well as general family health.

Part 2: Food in Cape Town and the nutrition transition

Ziegelman (2011) wrote “The language of food, like any expressive medium, is never fixed but perpetually a work in progress” (p.82). In the context of globalization, both foods and people move freely and foods are imbued with new meanings in the context of the new place. This malleability, and the meanings contained therein, was intertwined with the ways the food supply in Cape Town differed from migrants’ previous contexts. Specifically, cravings for fast foods and junk foods, which participants did *not* usually describe in health terms, were associated with living in Cape Town. The consumption of these foods during pregnancy reflected an intersection between socioeconomic status, health perceptions, the celebratory nature of pregnancy, and the food environment. To make sense of cravings and women’s sense of resignation over their food environment, the nutrition transition—the global transition from traditional foods to processed, high-fat diets—needs to be explored. For migrants, this transition was represented in participants’ perspectives of their energy dense, nutrient-poor diets in Cape Town.

Cravings for fast foods and junk foods

As with cravings for traditional food, migrant women in this study did not usually present their consumption of fast foods during pregnancy as either healthy or unhealthy. Rather, they represented their consumption in terms of desire, and in terms of being able to satiate their craving in the context of pregnancy. In addition to craving traditional foods, many respondents also described consuming more fast food during pregnancy. The terms “fast foods” and “junk foods” were not usually the terms the women used, they tended to name specific foods—potato chips, sweets, biscuits and soft drinks, particularly coke—or restaurants they craved food from— such as *Kentucky Fried Chicken (KFC)* and *Nandos* (A South African chain restaurant serving chicken). For many women in this study, requesting and consuming fast foods and foods from restaurants in general was presented as a way of celebrating pregnancy, as it represented a significant and exceptional expense. For many migrants, fast foods were “nice” (FG2ZM), or celebratory food. The consumption of junk foods and fast foods revealed pregnancy as a unique time since “expensive” foods were seen as an appropriate economic sacrifice during pregnancy:

I: *Did your husband treat you to any special foods?*

R: Ja he did there’s sometimes that I feel like ribs. Sometimes I feel like *Chicken Lickin’*.
He would make an extra effort to bring them.

Zimbabwean mother of 2, 18Z

Yet these foods did not effectively substitute for traditional foods, and were often described as being refused by women after the fact:

Like you buy even nice food, you buy *KFC*, you say ‘ah let me spoil her’, you buy *KFC*, she don’t want! [you ask] ‘What you want?’ She’ll tell you that she wants something that you can’t even get in South Africa.... she can tell you like in Zimbabwe they got small, small fishes... those one!

Zimbabwean men’s focus group, FG2ZM

One woman described looking forward to wanting *KFC* during pregnancy, because during pregnancy such a craving would be satisfied:

...when I was young I said I will want to eat *KFC* because my husband will be working... and I would like to eat those stuff... expensive stuff...

Zimbabwean Focus Group participant (FG2ZW), age 20, mother of one

However, this young woman, who had left Zimbabwe as a teenager, found she did not actually want *KFC* during pregnancy. In the context of a focus group discussion in which she reaffirmed her ties to home, she described a strong desire for traditional foods because *KFC* could not satisfy an underlying desire for the foods of home, and the sense of comfort that those foods provided.

Indeed, for Congolese and Zimbabwean women, the desire for fast foods tended to be juxtaposed with the lack of availability of traditional foods:

R: There in Zimbabwe I used to eat our own traditional foods.

[description of traditional foods] Yes, but with this one it was totally different.

[Laughter]

I: *What did you eat with this one?*

R: I wanted sweet stuff, fast foods. I almost ate fast food for this one I didn't cook for myself I was lazy even here at home. I think it is because I didn't access to the [traditional foods]...Ja [yes] because it is difficult for me to have our own traditional food. So I had to force myself to have an alternative.

30-year-old Zimbabwean mother of two, 15Z

While Congolese and Zimbabwean participants described the comfort they felt after eating traditional foods or clay soil, they did not describe this sense of comfort after eating *KFC* or *Nandos*. They largely described the ways that pregnancy made it possible to get food that would otherwise be considered too expensive. Past research has suggested that pregnant women, not unlike non-pregnant women, generally crave salt, fat, and sugar, perhaps as an evolutionary relic from when these foods were in short supply (Young & Pike, 2012). Rather than being a craving for home or a craving that has been socially constructed over many generations, women's descriptions of cravings for fast foods and junk foods seemed linked to a universal craving for salt, sugar and fat. Women's description of craving fast foods did not seem to mitigate the overall orientation of women towards home; rather the consumption of fast food and junk food during pregnancy revealed the ways urban migrants in Cape Town experienced the food environment in Cape Town.

Among Somali women, some expressed the sentiment of craving culturally specific foods, but the stronger sentiment was for fast foods and foods from restaurants. This seemed to be because for Somali women, the elusive quality of "freshness" was more important than the actual food item. Somali women were far less likely to describe specific foods. That is, women perceived a dramatic change in the quality of food in general and the way women shopped and consumed foods, between Somalia and South Africa:

I: Can you get the same food here as you ate in Somalia?

R: Yes.... But ... it's different. The food is the same but the quality is not the same.

23-year-old Somali mother of 1, 6S

Moreover, for Somali women, the desire for *Nandos* or restaurant food in general could not be easily separated out from gender roles and the perception that many Somali men were not considered able or willing to prepare food. That is, restaurant food relieved women from the burden of cooking and affirmed the celebratory nature of pregnancy. However, it did not shift the burden of food preparation to male partners:

R: When I was pregnant I liked to eat pizza.

I: Pizza? [Chuckles]

R: Yeah Mexican pizza! [...] But also *Nando's* I like to eat. But I can't afford but some of my friends bring for me.

I: Okay do you think they brought it especially for you because you were pregnant?

R: Yeah...Yeah everyone they interest in you.

27-year-old Somali mother of 3, 10S

R: during that time, I liked the food from the restaurant... so....Ja. Because in the house... The smell when everything is cooking and the smoke and all that.... But this [restaurant meal] just come from [Somali restaurant name] and it's ready. And it's fresh.

23-year-old Somali mother of 1, 6S

Somali participants tended to report severe nausea during the first trimester of pregnancy, whereas participants from Zimbabwe and Congo didn't talk about morning sickness in such extreme terms. In discussions with Somali women, they framed morning sickness as an opportunity to make the most of the only stage of life when they would be pampered. They reinforced the notion of pregnancy as a period of celebration:

I: Do you think your husbands get you special foods when you are pregnant?

All: Yes! [emphatic agreement]

R1: They get whatever you ask!

I: So what do you ask for?

R2: Actually there's only one time they're gonna give you whatever you ask. 'Cos the other times they gonna refuse. [Laughter and agreement]

R3: Pregnancy is a big chance for a woman!! [Laughter and agreement]

Somali women's focus group, FG9SW

Women unanimously agreed that pregnancy was a period during which Somali women enjoyed unique leverage and attention. Health was not raised as a focal point. Rather, pregnancy- and particularly early pregnancy- was a significant event because of the way that spousal power dynamics shifted. During pregnancy

there was the expectation that Somali men be attentive and caring, and this norm seemed proportional to a professed *lack* of expectation of husbands outside of this special period of pregnancy. Thus for Somali women, the desire for fast food seemed to be associated with the desire to have a break from cooking and the smell of food in the home. Love and pampering was conveyed by foods procured at significant cost during the first part of pregnancy, and the actual food was less important or universal than the sentiments the food conveyed. In Cape Town, this food took the form of soft drinks/sodas, fast food, and junk foods; this reflected the food environment, where junk food was accessible and affordable- often more affordable than traditional foods. Health was secondary to the experience of celebration.

“You can’t eat healthy here”

Most of them the life [here in Cape Town] is harder than there [in Somalia]. There... there is medical problem but here there is health issue. There you can get everything [food] anywhere you want, as long as you can afford it. In here it’s different story. Medical [care]... here you get all the medical you want - hospitals and everything- all the pregnancy [care] also. But when you want to eat healthy in here, different story!

Somali women’s focus group, FG9SW

In the previous section, I discussed the ways that—despite disparate motivations among different migrant groups—participants overwhelmingly described craving and consuming junk food and fast food. This consumption was a means of celebrating pregnancy and relieving oneself of the burden of household work. Yet food was also a means through which participants contrasted their fast, stressful, lives in Cape Town to romanticised memories of life back home. In these terms, poor nutrition and poor health were constructed as inevitable in Cape Town, both during pregnancy and outside of it.

Participants from all three countries described feeling less healthy in Cape Town, despite also describing improved access to medical care. These sentiments revealed that medical care had a somewhat circumscribed role that does not necessarily encompass day-to-day experiences of health, including nutrition. These more broadly defined feelings of wellbeing were described as influenced by the overall food environment, as well as one’s physical environment and by the feelings of stress and discrimination experienced in Cape Town. The theme of medical care- its scope, boundaries, experiences and limitations, will be discussed in Chapter 6, which focuses on the themes relating to experiences of medical care, the perceived role of medical care, and changed family structure in Cape Town.

In some ways, the sentiment that one cannot be healthy in South Africa is a variation on the theme of longing for home. South African foods were described as “unnatural” and therefore unhealthy, and foods from back home as “natural.” Participants in both focus groups and in-depth interview settings also highlighted the sentiment that life in Cape Town was more difficult than life “back home”, and that this difficulty was embodied in the food supply in South Africa. These sentiments reflect food as symbolic and romanticized (Stowers, 2012) as well as the reality of the nutrition transition- the shift towards large-scale, differentiated

agriculture and processed foods (Popkin, 1998; Popkin, 2002b).²¹ It is useful to reflect on these two parallel and complementary explanations for the contrasts participants highlighted between food at home and in Cape Town.

Firstly, Food encompasses a sense of home, a past life that is imagined as better than life in Cape Town. As Stowers writes of El Salvadorans in the United States, food can “evoke a past, romanticized life” (Stowers, 2012, p.376). Participants described food from home in emotive terms:

R: The food here is very different. Even the meat we are eating. Is a different taste from the meat we are eating [at] home.

I: *Mmm. how does it taste different?*

R: The meat from home it tastes... natural... When like I'm cooking meat there, you come from 10 meters, you smell that someone... there's meat... but here, the meat don't have [smell]... even chicken when someone is cooking chicken there, you smell it, you smell it far!

40-year-old Congolese mother of six, 13C

Maybe you are in the rural area, you give camel's milk, which is the most healthy milk ever existed!

Somali men's focus group, FG1SM

On the one hand, migrants' assertion that food back home was varied, fresh and healthy may reveal something important about food in Somalia, Congo and Zimbabwe. That is, in all likelihood, Cape Town is further along in the nutrition transition than migrants' home villages and cities in other parts of Africa. However, the study migrants were diverse, they were from multiple cities and towns, and had travelled and lived in other parts of Africa on their journey to Cape Town. They had lived for varying lengths of time in their home countries. Thus the unified assertion describing natural foods from home should not be taken as conclusive evidence of the “naturalness” of foods in Congo, Zimbabwe and Somalia and the “unnaturalness” of foods in Cape Town. Rather, it reveals a dominant discourse around food, and the terms in which food is considered healthy and unhealthy. It also reveals something about these specific migrant populations, and the way that they accessed foods in their countries of origin as compared to Cape Town. For example, there was heterogeneity in perceptions of the Zimbabwean food supply (discussion of GMO will follow later in this section):

R1: yes...because in South Africa you know most of the food that we eat is genetically modified and back home we never had genetically modified food.

R2: [interruption] No, no, Zimbabwe's food is full of GMO!

Zimbabwean men's focus group, FG2ZM

Moreover, most participants left their countries because of harsh economic conditions or because of war.

.....
21 The nutrition transition will be defined and discussed in more depth in the next section.

In this light, food was almost a frivolous concern, and longing was squashed:

I haven't thought about how the food will affect the health, it's only the taste... but even though I like the food in Somalia and the freshness... but the circumstances that led me to flee are still there....

24-year-old pregnant Somali mother of 1, 12S

However, the two quotes above represented the exceptions to participants' descriptions of food, rather than the consensus. Rather, nutrition during pregnancy is discussed in the context of challenges of life in South Africa- and the ways that life still feels tentative and temporary- despite the sense that most migrants expected to remain in Cape Town indefinitely. The romanticism expressed around food from home, and participants' craving for traditional foods affirmed the notion that food is a place where migrants reproduce culture (Stowers, 2012). Moreover, it indicated that while participants seldom described foods in terms of health, they also had an innate sense of the shortcomings of their South African diets.

Nutrition transitions for migrants in Cape Town

The previous two sections discussed the consumption of fast foods and migrants' longing for home as two dimensions of pregnant women's interaction with their food environment. Participants' descriptions of the food environment, and their perceptions of "genetically modified" and otherwise untrustworthy foods, reveals some of the ways that migrants in LMIC are navigating the nutrition transition. While the nutrition transition did not emerge as necessarily important to migrant maternal health prior to the study, it was apparent from women's discussion of nutrition during pregnancy that maternal nutrition was intertwined with the broader, global, transformations in food supply and consumption. For example, fast food is much more affordable and accessible in Cape Town than in migrants' countries of origin.

The nutrition transition has been written about at length in various contexts around the world (Kim, Moon & Popkin, 2000; Lipoeto, Wattanapenpaiboon, Malik, & Wahlqvist, 2004; Madanat S. Hawks, Campbell, Fowler, & J. Hawks, 2010), including South Africa (Bourne et al., 2002). The study of the global nutrition transition has been defined and drawn particular research attention over the past twenty years. Popkin (1996) wrote of the nutrition transition as having accelerated over the past 300 years, with the differentiation of urban and rural diets around the world, and the urban consumption of "superior grains, more milled and polished grains, higher fat content, more animal products, more sugar, and more prepared and processed foods." (p.3) This transition is currently occurring, or has largely already occurred, in low and high-income countries (Popkin, 2001). When taken together with much the lower caloric expenditure as compared with previous generations (Popkin, 2009), the nutrition transition helps to explain the rising tide of obesity across the world (Popkin, 2002a). In low-income countries, the rapid pace of the transition is cause for major concern, especially given the coexistence of under-nutrition and over-nutrition in the same household (Popkin, 2002a). The rapid change in diet has led to unique health risks, and the growing burden of non-communicable diseases in low and middle income countries is staggering (Popkin, 2002a). South Africa is no exception to this trend. Over the past fifty years, urban blacks have come to consume more fat, and obesity is rapidly increasing, especially amongst black women (Bourne, Lambert & Steyn, 2002). In the

context of maternal health, obesity and high blood pressure increase likelihood of pregnancy complications (Abu-Saad & Fraser, 2010).

Across Africa, there are multiple ‘nutrition transitions’ at play, not only the transition of the twentieth century. One of the clearest examples of this is the growth of maize meal, mielie pap, or sadza as a staple food across much of Africa. In historical context maize was introduced from the Americas, and has only been a staple across Africa for about the past two hundred years. For Somalis, at least one of their staple foods, spaghetti, was adopted even more recently, during Italian colonization during the early twentieth century. That is, the Somali consumption of spaghetti is already part of one nutrition transition among many. According to Raschke & Cheema’s discussion of diet (2008), over the past several centuries, ancient indigenous knowledge about “food habits, health and longevity ha[ve] progressively waned” in Africa (p.662).

Arguably, migrant nutrition in this study may represent part of this loss, where the ability of many migrants to prepare food was greatly undermined by the fact that kitchens were shared spaces, and the pressure of survival meant food preparation was of low priority. Moreover, older women were not present to help with food preparation, as may have been the case in migrants’ home environments. The reproduction of culture through food may be a luxury that migrants in Cape Town could not fully enjoy. The perpetuation of food traditions is not only a luxury, however. Adherence to the food traditions of previous generations has generally positive implications for health. While the nutrition transition has increased the availability of cheap calories, it is also implicated in rising rates of obesity. For migrants, the loss of food traditions potentially represents new vulnerability to chronic disease. For pregnant women and new babies with an intergenerational history of food shortages, this risk may be particularly acute, as malnutrition during pregnancy is associated with an increased risk of obesity in subsequent generations (de Rooij, Painter, Holleman, Bossuyt, Roseboom, 2007).

There is no one “traditional diet” for all time, for migrant women. Nevertheless, the pace of the current nutrition transition may be accentuated in the lives of migrants from other African countries settling in Cape Town. The move to Cape Town not only meant cheaper, more readily available meat, fat and grains as compared to home, it also brought with it a faster-paced lifestyle, less food preparation within the extended family, and different ways of shopping, which in turn increased the consumption of processed food and meats, and reduced the consumption of fruits and vegetables.

This was apparent when some woman craved food “from home”, these were cravings that could not be satisfied because the way one shopped in South Africa was perceived as fundamentally different. The difference in the ways that people obtained food was very important to what women consumed:

R: I was not eating vegetables, and that was my problem. Even the doctors explained to me, that’s maybe why I was swelling, that was why I did not get vitamins I needed. So I was not using that...

I: *That much vegetables. Why not? Do you usually eat vegetables?*

R: You know, I don’t look for it and... In Kenya, and in Somalia, there are street vendors, they bring the bananas from the tree, or from the farm, and the fresh vegetables... to your house... they come here and say do you want it. But here noone is coming and you

get lazy to go out...So it's not the same.

I: Do you think that affects people's health?

R: I think so, because you know the vegetables are good for health...so if I... was using those vegetables I don't think I would be swollen or those other things... Ja. So I realize. It effects in some way

23-year-old Somali mother of 1, 11S

Here because of this GMO things grow fast. There in Zimbabwe you have to plough on your own. You have your own garden at your own place. You don't have to go and buy at the supermarket or what. ...And so if I feel like I want to eat vegetables just out and take it from the garden. Unlike here you have to go to the market or to the shops of which it is not fresh, directly from the garden.

30-year-old Zimbabwean mother of 2, 15Z

This juxtaposition of "good food" in migrant's countries of origin, as compared to Cape Town, was a strongly stated, common factor that impacted on migrants' nutrition. The difference in the way that woman source food in their countries of origin- either from vendors or from their gardens or from public spaces- impacted what women reportedly ate; they did not talk of buying vegetables from South African supermarkets. For example, while Somali women could access most ingredients in Cape Town to cook dishes that were recognizably "Somali", these women still felt their diets were markedly different. This sentiment was expressed across all migrant groups:

That [fresh camel liver] is very nice! You can't get here yeah....You can't, everything is frozen in the fridge....Yeah but there it's fresh.

27-year-old Somali mother of 3, 10S

Like this respondent, many participants from all three countries of origin described the freshness of meats in reference to the absence of fridges and freezers. Participants described consuming lots of fresh fruits and vegetables, such as mangoes, bananas, and leafy greens, back home. However, they didn't describe eating these foods in South Africa.

While many participants felt strongly that the taste of food depended on its freshness and naturalness, there is limited public health research on this subject, or on the relative nutritional value of produce over time. For example, frozen produce is thought to retain the same nutritional value as fresh produce (Favell, 1998). However, it seemed that participants were eating fresh fruits and vegetables at home because of taste, not because they believed those foods to be necessarily healthy.

...in Somalia, [you've got] access to the vegetables, where you've got bananas, mangoes, fresh... but in South Africa you have to buy it and so we are just not that much focused on it. So we would even forget...

23-year old Somali mother of 1, 11S

Moreover, migrants did not describe having easy access to fresh fruits and vegetables. For example, in Salt

River (Figure 3), where many Congolese migrants reside, there is limited access to supermarkets, and small corner stores do not stock many fruits or vegetables. While there are fruits and vegetables at the nearby train station, participants were ambivalent about the quality, and described having to add meat to make the vegetables more palatable (32 year old Congolese mother of 2, 2C). While there is a large supermarket in Bellville, where many Somalis live, Somalis did not talk of going there. Rather, they spoke of buying their groceries at small corner stores, which are usually owned and operated by Somalis. This is partially because supermarkets generally stock foods in larger units, whereas corner stores will break packages into small quantities, allowing for small purchases (Battersby, 2011). While these stores sometimes stocked bananas, potatoes, or tomatoes, their supply was somewhat unpredictable and the freshness of the produce questionable.

Women repeatedly highlighted chicken in South Africa as different from chicken in their home countries. A dominant way this “difference” was understood was in the time taken for chicken to grow- that time was an important part of food being healthy and tasty:

No, because... they keep chicken for three months... they keep it for... to keep, but here it's chicken for one week... There they don't inject chicken, just normal chicken... I feel it's because it's natural... that's different.

40-year-old Congolese mother of six, 13C

I also heard that here in South Africa that the chickens in South Africa grows up in three days....of which I don't know about that I just heard. Unlike in Zim you have to monitor it for three months...For it to, to be killed to be eaten.

30-year-old Zimbabwean mother of 3, 15Z

Here in South Africa... I don't know.... I heard they inject their food whatever so that they can quickly; quickly become ripe....Whatever even in the farms like; they're maize even they're sweet potatoes and stuff like that...Um...Looking at their chicken here it takes two weeks; is it two weeks or a week?

30-year-old Zimbabwean Mother of 3, 18Z

R1: The difference is... in Zimbabwe... we eat real food. When it comes to meat. When it comes to milk... when it comes to every food you eat. [...]

R2: Because like the chickens... most of the chickens... they are being imported now. Especially if you go to Checkers. And Pick N Pay also I think. They're importing their chicken. They are not from here. They are from another country.

Zimbabwean Women's Focus Group, FG8ZW

Women spoke in very concrete terms about the length of time it took for chickens in Cape Town to be raised, without being asked. Moreover, women in one Zimbabwean focus group brought up the fact that chickens in Cape Town supermarkets were imported from Brazil, rather than raised in South Africa (FG8ZW). In keeping with the kinds of traditional foods women spoke about eating, most women had a strong sense of

connection to their food, to the point where they knew how long something should take to grow, without self-identifying as gardeners or farmers or as particularly knowledgeable. Indeed, Congolese and Zimbabwean women often described consuming a wide range of “wild” foods, including mushrooms, mopane worms, greens of different kinds, and pigeons. In contrast, many Congolese and Zimbabwean participants described the central component of their diet in Cape Town as “chicken.” Migrants consumed much more meat in South Africa, but meat was not necessarily desirable:

R: In Congo you eat meat, you eat meat maybe two times.. When you got the birthday .. But here, you eat meat every day, no problem.

I: *Do you think that's good or bad?*

R: Eeh. Good and bad. [Laughter]

I: *Why?*

R: You see the meat, maybe one .. You see the meat for three months maybe you see it big like ... maybe in Congo if you have the chicken for three months, you're still waiting for the chicken to grow up. Here in one month the chicken grows up, it's not tasting, it's not nice.

29-year-old Congolese mother of 1, 4C

These descriptions of chickens were shorthand for speaking about the food supply in Cape Town. Perceptions of food in Cape Town was described as full of “GMOs”, where it was clear that when participants used the term “GMO”, they did not refer to genetic modification of food, but to the notion of time, and taking shortcuts rather than giving food the time it needs to grow.

R: Not the same the food in Zimbabwe is the real, real food. The one from South Africa there is a lot of gmos.

I: *Mm... What does that mean like...?*

R: The gmos?

I: *Ja.*

R: I don't know [Laughter] what they put like for chicken; the small chickens grow big earlier than the time...Ja but then there back in Zimbabwe they have to feed it and it will grow in its own time.

29-year-old Zimbabwean mother of 3, 16Z

At the same time, they felt resigned to the food system here. Ironically, meat was seen as “the only thing to eat”

I: *Would you consider not eating chicken any more? Because the chicken is not good?*
[Laughter]

R: But if you don't eat chicken, what else can you eat?!!! [Laughter] ...[...].We're eating because we don't have another choice. We have only meat and chicken. So sometimes [that's what] we buy...

30-year-old Congolese mother of 2, 1C

I: You eat everything here as well?

R: Ja, ja I eat everything; I eat everything even chicken from here, I eat chicken from here.

28-year-old Congolese mother of three, 21C

In one of the Congolese focus groups, women contrasted what they perceived as the limited food options in South Africa with the variety and quality of food back in Congo:

R1: the food from home is natural, but you don't have that much possibility to have chicken every day, to have meat every day but we have food every day, like today you eat fish, tomorrow you can eat you see like these worm coming from the tree, you can eat that

R2: yes, tomorrow you can eat, all those also is vitamin you know... different, even vegetables

R3: we have many very different vegR2: here is only cabbage and spinach; there we eat lot of vegetables.

Congolese Women's Focus Group, FG6CW

In this light, in addition to the nostalgia embedded in women's descriptions of foods from home, these descriptions speak to very real differences in the foods migrants ended up consuming in South Africa. These, in turn, relate to how women felt about their overall nutrition, particularly during pregnancy. There were several occasions when women associated the food supply in South Africa with health. For example:

I: Can you tell me more about that?... about why in Congo you think you would have been ok why you wouldn't have had high blood pressure.

R: In Congo every thing that we take there is no... Not too much product not too much chemicals. Everything is fresh.

I: What does the chemicals...?

R: ...Everything is fresh

I: ...what do the chemicals do to make you sick? What do you think? Could you tell me more?

R: Here if we take chicken [it has] too much vitamin [laughter]. Here, in three months, chicken is big. There it can't take three months the chicken is too small. They give them too much vitamin it can give people sickness...even the farm food, food from the farm.... They put too much chemical!

26-year-old Congolese mother of 2, 2C

And if you can see... the babies... they have got different... some they grow big... like abnormal. Like you can see... like this child [motions to 6-year old in room] if you see the age of other children in Zimbabwe... you can see they are tiny, but they are healthy. But if you can see a child which is here, you can see she or he is fat, but they are not healthy. Because they are eating fast food. That food that is making them grow fast, before their age. You see. That is the problem.

Zimbabwean women's Focus Group, FG8ZW

In the Zimbabwean men's focus group, some participants in the group felt that food in South Africa caused babies to grow unnaturally large in the womb, necessitating caesarean sections:

...this element of genetically modified food, it gets me worried.[...]so I was worried, I don't know if, I heard it has an effect also that it gives maybe to the child -- mostly like now, most of us Zimbabwe's we are, or not even Zimbabwe's they having operations, surgical births, you know most of them, I heard it's been caused by Genetically Modified Foods.. because the children, the babies in the womb they grow big, I don't know how!

Zimbabwean men's focus group, FG2ZM

In Cape Town, migrant women's concern over genetically modified foods may be problematic in the sense that it was not understood exactly what "GMO" meant, and the unknown menace conveyed a sense of vague dislike of all foods in Cape Town. Notably, unprocessed foods that had a "natural" version from home were decried, whereas packaged, processed foods- junk foods- were not considered in these terms; chicken and other meat, as well as fruits and vegetables were compared whereas junk foods such as chips and soft drinks were not as easily comparable by taste. This seemed to accentuate the nutrition transition and migrants' potentially growing vulnerability to chronic non-communicable disease (Sargent & Larchanché, 2011).

However, not all study respondents made this connection. Rather, when explicitly asked whether the poor food supply affected their health, several respondents felt that it did not, or that it had only a limited relationship to overall health. For example, in the Congolese men's focus group several men felt that the health effect was limited to what one's digestive system was accustomed to:

R1: it can fully affect if the mum started there and come here, but when the baby's born here I don't that can affect him

R2: it won't affect

R1: because the baby will be used to what he found, ja, I don't think it can affect, it only affect when someone changes the area from there to here then, but

I: *so you adjust?*

R: Cape Town is like different digesting, it changes...

I: *okay*

R3: but the more you keep on staying here you

R4: you get used to it

Congolese Men's Focus Group, FG3CM

Migrants' perspective on the lack of "real" food in South Africa seemed associated with the dominant theme of lack of time and the centrality of work here in Cape Town:

R: But in Zimbabwe they nurture their things. They have to grow with their own time. Until they are ready to be used. Slaughtered or to be...Or to be eaten or whatever they don't inject their food and stuff like that. It's more healthier. Because looking at the pumpkins err...The sweet potatoes or the potatoes. They have to grow... []Eating their food from the soil and stuff like that. Until they are ready to be used by people.

I: Do you think it affects the taste?

R: The taste is also different...The things here they don't taste nice at all.

30-year-old Zimbabwean Mother of 3, 18Z

In addition to the connection women made between natural food and a "natural" length of time needed to grow good food, there was a sense of concern over the unknown: Where did the food in supermarkets come from? How was it grown?:

Yes it does in a way because like; the ones that we buy from the shops we don't know they... Like how they plough them; how they grow; how long does it take for them to, to take it and put them on the shelves. Unlike for our own vegetables straight from the garden; wash them; cook them and eat....And here they are frozen....Most of the vegetable in South Africa they are frozen. I like the ones that we eat from Zimbabwe. Direct from the garden fresh.

30-year-old Zimbabwean mother of 2, 15Z

While elements of the nutrition transition seem to clearly resonate with the broader trends towards greater meat, fat and processed food consumption, migrants framed this transition in somewhat unexpected ways. Industrialized foods were not considered preferable to the foods previously consumed, they were just considered pragmatic. Moreover, the widespread consumption of food that was seen as "GMO", "injected" or "made to grow before its time" is symbolic, revealing the ways that participants' perceived life in Cape Town as fast-paced and artificial. For migrants moving to a new place with new foods, the global nutrition transition became one important factor influencing maternal and infant nutrition, and it seems that many migrants consumed energy-dense, nutrient-poor diets.

Part 3: Perceptions of food and health during pregnancy and beyond

In the previous sections, I discussed the role of longing and women's orientation towards home during pregnancy, as well as the way that participants discussed their changing diet. In this section, I will focus on the intersections of these two themes with perceptions of food and health. The overall conversation around food and health during pregnancy differed from the discourse common in the maternal nutrition literature. Whereas the- largely western- discourse around maternal nutrition has tended to consider pregnant women as eating healthy "for" the baby, as well as in terms of long-term health, most participants in this study did not frame their maternal diet in these terms. Women's approach to iron-folic acid supplementation is used as one illustration of this approach. I explore the potential interpretations and health implications of participants' silence around food scarcity.

Perceptions of nutrition: Longings framed as outside of health

While much of the nutrition literature studying food choices describes an inherent conflict between the food one desires and the food one should consume for the sake of health or for the sake of the baby (James, 2004), for migrants in Cape Town this conflict was almost completely absent. Amongst participants in this

study, food traditions were prioritised over health, and health value of foods was secondary to their cultural meanings. For example, most study respondents did not describe fast food as necessarily unhealthy; it was largely not considered in health terms at all. Many women described eating what they felt like eating, and it was generally assumed that this was what they *should* eat:

I: Do you think that you ate well while you were pregnant?

R: Yes.

I: Why?

R: Ehh. Because if I feel [like] something, I eat it. If I feel I want to eat KFC, I can do it, I'm going to tell someone, oh buy for me KFC, I can eat it.

26-year-old Congolese mother of one, 5C

I: Did you have specific foods that you liked?

R: Mm!! I like that small small small small fish. [...]

I: Mmm. Do you think you ate those in order to keep the baby healthy? Or because you felt like it?

R: Umm mm. because you feel it.

40-year-old Congolese mother of 6, 13C

Participants' cravings during pregnancy were considered synonymous with health both for women and their babies, because the health of a mother was not distinct from the health of their baby:

I: Ok... And it's [vitamins] for the baby or you?

R: For you and the baby! You are pregnant! If you take, the baby take also!

31-year old Congolese mother of 2, 2C

When you the ngaingai (sour vegetables), you feel fine! ...[...] When you eat like that, you ... I don't know whether the baby needs that one! When you eat it, the baby eats it! [Laughter]

29-year-old Congolese mother of 1, 4C

When women reflected on the nutrition advice of their own mothers they described this advice as empowering rather than prescriptive. They were encouraged to trust their bodies and eat what they felt like eating:

She [mother] just said, 'you must eat what you are craving for', because the pregnancy won't have a programme that, this is the food you must eat, and she just said that if you like you want this feel free to eat, she wasn't specific 'eat this, eat this'.

30-year-old Zimbabwean mother of 2, 15Z

I: If you spoke to your mom, would she say 'hey are you eating that or?'... or anything like that?

R: No. She would just give you whatever you are craving for if you say you want that she will give it to you.

26-year-old Zimbabwean mother of 2, 14Z

While relatively uncommon, some Congolese women described craving traditional beer during pregnancy. The handful of women who mentioned traditional beer did not describe this craving as necessarily problematic. However, it was not apparent the extent to which women actually consumed beer during pregnancy; one woman described pouring beer out in order to satiate her craving by smelling the beer (40-year-old mother of six, 13C).

Rather than health and desire existing separately or even conflicting with each other, the fulfilment of desire was the embodiment of health. “Healthy” was a familiar, oft-used, but not very meaningful category for most women, like something that is known but does not have an equivalent term in another language. For some women, fast food was healthy:

I: Why KFC, milkshake, juice, and milk- what makes those healthy?

R: Because if I drink them I’m not going to vomit. If I drink tea, I’m going to vomit. That’s why I think it’s better to maybe drink milkshake.

I: And why KFC? Same thing, or different?

R: Because, there is vitamins in KFC.

26-year-old Congolese mother of one, 5C

Women consistently described their habits emerging from desire, rather than out of a preconceived notion of health, food was healthy because it was “the food I know from when I came into the world.” (24-year-old pregnant Somali mother of 1, 12S), and trying to fulfil a craving was inevitable:

R: You don’t decide! [Laughter, agreement] It’s a craving! [Laughter] [...]

I: Do you think it has something in it that will help? You or the baby?

R: It’s just for my appetite.

Zimbabwean Women’s Focus Group, FG8ZW

With the possible exception of geophagy and perhaps traditional beer (a minor subtheme, amongst Congolese women only), many of the traditional foods that were craved during pregnancy seem to be consistently foods that are likely to be healthy for a growing baby- dark leafy greens, dried fish and organ meats. However, since these cravings were never about health in the first place, when women were unable to access many of the traditional foods they craved, their requests took the form of fast food and other restaurant food, and junk foods.

Some women presented a different stance: while it was rare for a woman to describe eating or avoiding specific foods for the baby, or generally for health, there were a few instances of Zimbabwean women describing their nutrition in terms of the health of their child. This 26-year-old Zimbabwean mother of two expressed this sentiment of altering her diet- or resisting her cravings- for the sake of her baby’s health. She

framed this in terms of the advice of the clinic:

R: I felt like eating a lot of fizzy drinks, cakes, cream buns, [laughs] all that sort of stuff.... Biscuits... I had like a lot of cravings especially sometimes at night I feel like eating cake, cream...

I: *Okay. Did you usually eat those things when you felt like them?*

R: No.

I: *No?*

R: Sometimes yes, I was tempted so I had to eat but when I think about the baby that I'm carrying I have to say no and maybe opt for something else. Like instead of biscuits I had to buy crackers....Crackers...like *TUK* [a type of cracker] those biscuits so if I think of eating biscuits with cream had I to opt for a *TUK*.

29-year-old Zimbabwean mother of two, 16Z

Notably, the crackers she describes as a healthy option are highly processed and full of salt. Despite wanting to eat for the sake of her baby, the advice of the clinic was foreign and inaccessible to her experiences of pregnancy:

R: They recommend you to eat more...err...meals like salads those healthy stuff but, you know when you are pregnant you can't have just a salad.

I: *Yeah, yeah. Do you like salad?*

R: Oh no! [Laughs]

29-year-old Zimbabwean mother of two, 16Z

The clinic advice was laughably distant from woman's experience, which reaffirmed the primacy of her own feelings. While associated with pleasure and food traditions, food was also utilitarian. Eating for the sake of health was seen as a foreign, and perhaps frivolous, concern. This contrasts with the conflict between health and pleasure that is present in healthy eating discourses in HIC (Niva, 2007).

Many of the implications of these health perceptions lie beyond pregnancy, in the long-term health of women and their families. Few women described a need to limit any foods, particularly during pregnancy. It is not immediately clear from the literature whether, and in what context, eating for "health" results in better health than eating in accordance with cravings. Nevertheless,

health interventions that appeal to women's guilt or obligation to their foetus may be counterproductive in this case, where women describe eating based on their personal preferences.

In LMIC, the rapid shift of diets towards caloric excess, and the coexistence of under-nutrition and over-nutrition in single households, helps to contextualise women's perceptions of healthy nutrition. Over-nutrition is a relatively new concern in many parts of Africa and for most participants in this study, the understandings and meanings associated with maternal nutrition remain oriented towards the historically more pressing problem of undernutrition. While women's description of their diets during pregnancy suggest that participants felt they obtained adequate calories, women did not necessarily consider food more or less

nutritious based on composition of fats, sugars, protein or micronutrients. Nor did they describe their food intake in terms of calories. Rather, food was described as longing and lack of access to good quality food.

Case Study: Iron-folic acid supplementation during pregnancy

Maternal and infant nutrition involves integrating very specific recommendations into complex worlds. For example, folic acid supplementation seems to be a very specific, measurable, discrete, easy-to-cost intervention. According to Sanghvi and colleagues (2010), iron-deficiency anaemia underlies 115,000 maternal deaths every year. Iron-folic acid supplementation is one of the most important and cost effective interventions for preventing infant and maternal deaths (Sanghvi Harvey, & Wainwright, 2010). The WHO recommends supplementation of iron and folic acid throughout pregnancy and three months postpartum, with pregnant women being particularly vulnerable to anaemia in the third trimester (Stoltzfus & Dreyfuss, 1998, p.18). In studies of prenatal vitamin use in developing country contexts, adherence to vitamin supplementation was found to increase the birth-weight and growth rate of infants (Passerini et al., 2012; Semba et al., 1997), and reduce preventable hospitalisations (Hans & Edward, 2010). In this section, I explore iron-folic acid supplementation in detail as it provides a window into the broader themes of health and wellness during pregnancy, and into how women balanced their own cultural norms and cultural memories of home with medical recommendations.

While there have been studies documenting low rates of adherence to micronutrient supplementation (Bloomfield, 2011), there has been less exploration of the motivations and understandings women have about taking supplements, particularly in low and middle-income settings (Jasti, Siega-Riz, Cogswell, Hartzema & Bentley, 2005). The majority of participants in this study mentioned being given supplements during pregnancy check-ups in South Africa, which is consistent with the South African Department of Health policy of iron-folic acid supplementations in clinics. However, very few participants actually reported taking the supplement on a consistent basis. In the migrant context in Cape Town, the potential language barrier in antenatal clinics further complicated taking supplements (this communication barrier explored in more depth in Chapter 6).

Women's use of iron and folic acid supplements—or rather, the choice not to use them—reflects participants' most common description of nutrition and pregnancy. It was very unusual for participants in this study to describe taking vitamins before becoming pregnant; in fact, only one respondent reported taking vitamins before becoming pregnant, at the recommendation of a friend (17Z, Zimbabwean woman, 27-year-old mother of two). Since women did not have their first clinic visit until late in their first trimester, iron and folic acid supplementation did not occur pre-conception nor during the crucial developmental phase of the first trimester. For women with potentially low stores of folic acid, consuming folic acid before pregnancy helps to prevent neural tube defects (Manniën, de Jonge, Cornel, Spelten, & Hutton, 2013). Given that participants did not receive this protective benefit, they may be at increased risk of neural tube defects, as compared to women who do take iron-folic acid supplements prior to conception.

Overall, women's perspectives on vitamins demonstrated the dominant theme of the previous section: that one's own body, how one currently feels, is one's best guide to health. If women felt healthy and were

consuming the foods they liked, they did not see a need for supplements, which were generally perceived as curative and as “medicine”, rather than routine and preventive. Women primarily spoke about anaemia as a disease that could be treated effectively in hospital. In this context, iron supplementation was conceived of as a treatment for a specific disease. In cases where women had serious iron-deficiency anaemia warranting hospitalisation, iron tablets were understood and acceptable as a treatment in all three migrant groups. For example:

R: I used to go to the clinic at [clinic name], and they referred me to [hospital name] and they checked, and my blood was too low- there was no blood, so they gave me these vitamin pills.

I: *And did it help?*

R: Ja, after, I used for one month and then I went back to [hospital name] for checking and they said I was ok.

24-year-old pregnant Somali mother of 1, 12S [interpreter present]

Indeed, it was common for women to describe having “low blood”- iron deficiency anaemia.

I: *Are the multivitamins pretty common in Congo? Do most women take vitamins?*

R: No no, almost [none], it depends if you're strong, or if you have enough blood [or not]

40 –year-old Congolese mother of 4, 13C

If you have not enough blood they give you, that medication, called haemoglobin [iron]. If you have enough blood they give you, they gonna give the acid folic [folic acid].

32-year-old Congolese mother of 2, 2C

A relatively minor subtheme referring to a British-made drink common in Somalia and the Arab peninsula, *Vimto*, offers a potential insight into how women may imagine their own health in the context of their health environments- and how women think of vitamins. *Vimto* is a drink that was initially marketed as a tonic or health drink at the turn of the twentieth century but which is now essentially a soft drink with just 3% fruit concentrate:

In Somalia there is not enough hospitals, so there is no system... for pregnant women. So they have little access to healthcare. But there are pharmacies, and so when the woman has got problems she just go to pharmacy to check up, and if they have normal blood, they just have some syrups, they just have those orange juice, and Vimto, which has some vitamins.

24-year old pregnant mother of 1, 12S

Iron deficiency anaemia—usually referred to as “low blood”, or “not enough blood” or “the blood is too small” (FG1SM) - is well-known and described by many participants from all communities in terms that suggested it was understood to require special attention, and had some element of prevention:

But also they give other things if you don't come from the rural, they come from rural place, not in town, so there is a mother or granny giving you things from the tree, ne, the red one,

it means it must replace blood. But maybe they don't know what is in that tree.

40 –year-old Congolese mother of 4, 13C

Indeed, the first part of this chapter described Congolese and Zimbabwean pregnant women's consumption of traditional leafy greens, which are understood as cravings rather than as explicitly eating for health, yet are high in iron. The perception of iron deficiency anaemia remained as an illness that required treatment rather than one that could be prevented, but women's cultural memory inclined them to consume a lot of green leafy vegetables during pregnancy, and these vegetables are consumed in dried form, and so are available year round. A handful of women from Zimbabwe described preparing vegetables themselves when they were in Zimbabwe, though in South Africa all women described buying the leaves from specialty stores. In Cape Town, the failure to consume these greens may translate to increased risk of anaemia, relative to their diet at home.

Moreover, women described being given the supplements and feeling obliged to take them without any real sense of the benefit they provided to healthy pregnant women or their babies. As a result, the supplements were perceived to have side effects without any clear benefit, so many women stopped taking them. For example, it was common for women to say that they took vitamins then, on probing, to explain that they took the vitamins only once or twice:

I: Did you take multivitamins during your pregnancy?

R: I did.

I: Okay. Why... why do people sometimes take multivitamins? Do you know what it's for?

R: I don't know.

[Laughter]

R: I don't know they just say you must take the vitamin tablets. They are good for the baby and stuff like that; but they gave me the vitamin tablets and I took them once. And whenever I took them I felt dizzy. I felt like...so I stopped taking them.

I: Yes...And your babies um...Do you think that it affected them whether you take them or not?

R: No it didn't.

31-year-old Zimbabwean mother of 3, 18Z

For me that vitamin, if you take it you become sick! I never take it. If I take it I'm not going to eat until the next day. Dizzy, nausea! If you don't take it you're fine.

28-year-old Congolese mother of 3, 3C

But me like my first one I didn't take those tablets...I can't lie... because when I was putting like this [gesturing away from her] smelling; it's smelling very bad...[] I've got a box of my medicine I put it like this, I close hard so I must not... Smell that...

29-year-old Congolese mother of 3, 21C

While migrants consistently reported medical advice as ‘truth’ and even a sense that they should take medical advice, they did not necessarily consider this ‘truth’ to apply to their specific circumstances. For example, in one focus group the man described vitamins- multiple micronutrient supplementation- as too expensive:

R: ja, from my experience, my wife was advised to take some supplements that she had to buy from the pharmacy, but it was very expensive.

I: *like too expensive to actually buy?*

R: ja, she ended up just doing without it...but ja, some of the things that are healthy for the mother... so those who are wealthy and those who are rich, they enjoy good [health] compared to those who are not.

Zimbabwean men’s Focus Group, FG2ZW

Other women combined medical advice to take supplements with the practice of eating clay soil during pregnancy to settle nausea or cravings:

R1: I think it depends, because like those pills, like me...those pills if I take them, I vomit, the smell, [it’s] very strong//very strong [agreement]// ja.

I: *Do other people have that experience?*

R2: Ja. They are very strong.

I: *Ok. So what did you do? Do you stop taking them?*

R3: You just push yourself. Because you’re at the clinic, you’ll be told that... they tell that it will benefit, for the baby... ja, so you have to force yourself sometimes you can vomit one. like me, I was doing like if I drink them, I must have a piece of sand... next to me... then I will just chew it. [Laughter- agreement] and swallow. So that I can’t vomit.

Zimbabwean women’s focus group, FG8ZW

Another perspective was that multivitamins-and even prenatal visits in general- are necessary because food in South Africa is so unhealthy:

I: *Do you think that [differences between South African and Zimbabwean food] has an impact on the people’s lives or how their health goes or...?*

R: I would, I would say yes because; in Zim women don’t do the Preggie Vite....At all.... They don’t do the calcium; the folic and the... They just give birth. My two sisters gave birth in Zim. They don’t even go to the clinic until they’re six months [...] So the food there it’s, it’s nourished enough to help mommy and baby. But when you’re here they say ‘you need to take some folic; you need iron tablets.’ Yes... I understand why they say that.

30-year-old Zimbabwean mother of 4, 20Z

In this light, supplementation is a concession in an unhealthy context, and serves as further confirmation for migrant women that Cape Town is an unhealthy environment. Women’s reasons for not consuming iron and folic acid supplements were related to their perception that supplements produced the side effects of

nausea and dizziness, and that there were no adverse effects associated with not consuming the supplements.

South African wheat and maize is purportedly fortified with vitamin A, iron and nicotinamide, yet in practice levels of fortification are “unsatisfactory” (Yusufali, Sunley, de Hoop & Panagides, 2012). In this context, women’s consumption of other sources of iron and folic acid, often in the form of dried leafy green vegetables imported from home, may be important. However, women’s sense that they would receive treatment in hospitals is also important to how they conceive of anaemia. Rather than perceiving anaemia as dangerous and potentially life-threatening to both mother and foetus, women’s experience of medical care in South Africa seemed to be positive enough that they saw anaemia as a minor complication. All three migrant groups originate from areas with endemic parasitic diseases (e.g. hookworm) and malaria, which increase the prevalence of anaemia; the prevalence of anaemia amongst pregnant women is over 50% in most African countries, making it as normal, or even more normal, than having sufficient iron (Gangopadhyay, Karoshi, & Keith, 2011).

Overall, migrant women’s perspectives on supplementation appear to emerge from familiarity with anaemia in their home countries. As such, the South African fortification of staple foods may represent an important intervention for pregnant migrant women, but for some migrants, supplementation will be ineffective in raising levels of micronutrients, as women do not always consume South-African made staple foods. Educational messaging that explains anaemia as highly preventable in a Cape Town context may be an important message for health professionals to convey during early antenatal visits with migrant women.

In his review of maternal nutrition and birth outcomes, Abu-Saad asserted that, given the complex interrelationships between micronutrients, rather than focusing on single micro-nutrients, women’s overall, long-term nutritional status should be the focus of interventions (Abu-Saad & Fraser, 2010). This approach seems appropriate to the migrant case. More broadly, migrants’ understanding of anaemia was juxtaposed with their lack of adherence to iron-folic acid supplementation, thus illustrating the ways that maternal and infant health was framed in terms of acute and tangible, rather than in terms of long-term and abstract, health problems.

A silence around food scarcity

To a large extent, there was little mention of food scarcity. Participants resisted questions that implied food choices were made on the basis of cost, and did not describe hunger. Yet the National Food Consumption Survey Fortification Baseline I (NFCSFB-1) found in 2005 that one in two households in South Africa experienced hunger, and only one in four households appeared to be food secure from a nutritional perspective (Grundlingh, Herselman & Iversen, 2013). Previous studies have found migration to be a determinant of urban nutrition insecurity (Choudhary & Parthasarathy, 2009). Despite the implied prevalence of hunger in the literature, the sentiment of overall food security- being able to consistently get enough calories- was only briefly expressed- in the abstract- in a Congolese women’s focus group around food choices. In this context, dietary diversity, rather than overall calories, was a concern for refugee families:

R: It’s kind of [depends] on your possibility, because you can see some people who are eating same food from first to first

I: *just pap?*

R: yes. Because maybe the income is low, you know our country is war, sometime the war come here in Cape Town, you move like to Jo'burg, so you leave everything in Cape Town, and there is no income for you, so you have to eat the food that you see every day, every day, so the child also is going to [be] used [to it]

Congolese women's focus group, FG6CW

Thus food security was generally not raised by respondents in the Cape Town context, even amongst women who were living in a temporary shelter. I occasionally asked a question about foods women would eat if they could afford anything, and usually they did not feel that they ate less healthily during pregnancy because of lack of resources. While money was a major source of stress for most women, basic food security was not raised as an issue:

It [fruit] is not expensive. Even R1 you can buy fruit....50 cents you can buy fruit. it's not expensive.

30-year-old Congolese mother of 3, 22C

In general, migrants in Cape Town may have somewhat more resources than migrants to Johannesburg, For example, implied by their travelling a greater distance from home. However, it also seems that silence was related to stigma. There is likely to be particular stigma around food insecurity amongst Somalis, because of the sense that one should be able to get help from friends and family to ensure you eat well:

Everyone can afford it. However much they are not well off, normally, they can afford. Anything to do with eating, believe me, they can afford. However much help they can get... they don't sleep comfortably, or don't have nice houses... but they have to eat.

30-year old Somali mother of 1

On listening to the interviews and reading the transcripts, the Somali research assistant to the study suggested that in a small number of in-depth interviews, Somali women hesitated over questions around shopping and food, and their tone suggested embarrassment around shopping. In one room, the family's full store of food fitted into one small nightstand, and consisted primarily of very basic staples (i.e. plain spaghetti). Despite the sense that no Somali would allow a community member to go hungry, Maxwell's (1999) notion that the nature of the urban food supply and urban hunger is a personal rather than a collective problem may be particularly apt. That is, in contrast to a food shortage in relation to collective drought or flooding, lack of food in urban settings is related to income, and less immediately visible.

Thus this silence, rather than reflecting food security, seemed to reflect that it is hard to discuss hunger with a stranger. For Somalis in particular, it is likely to be a source of shame that a fellow Somali is without food. In (Chapter 6), I will discuss the ways that this embarrassment fits with the notion of social capital within the Congolese, Zimbabwean and Somali populations in Cape Town. While women's cravings and consumption of fast foods may seem to conflict with the possibility of food scarcity, these reports of consuming fast foods also seemed somewhat rooted in experiences of scarcity. Past research into the roles of cravings

has highlighted the potential relationship between obesity and previous experiences of hunger (Stowers, 2012). A dominant way of thinking about pregnancy was through the lens of being “special”. “Special” meant foods that were ordinarily difficult to afford, including fast foods and junk foods. While women’s cravings for fast foods did not reflect caloric scarcity, they reflected something about the economic reality of migrant women, and the ways that migration, economic hardship, and the nutrition transition converged in the ways that women relished fast foods during pregnancy. If, indeed, food scarcity is a reality, it is likely that dietary diversity, rather than overall caloric needs, may be the more pressing concern. The subject of food scarcity is worthy of further investigation.

Conclusions

For many migrants, the longing for traditional foods, including leafy greens, organ meats, and dried fish represented the healthy food traditions of Congolese and Zimbabwean, and to a lesser extent Somali, migrants. While the rapidity of the nutrition transition leaves migrants particularly vulnerable to poor nutrition, cultivating and preserving strong food traditions may help to mitigate this effect. Recognizing that food traditions are constantly in flux, it may be important to consider the ways that food preparation can be preserved in an urban context. For migrants in Cape Town, time shortage, access to kitchen space, and the costs of traditional foods, were all significant issues. Interventions should consider these significant challenges.

Few qualitative studies have previously investigated the intersection between new food contexts and food choices in LMIC; moreover nutrition during pregnancy is generally relatively understudied. As such, this chapter revealed insights into how migrants in low- and middle-income settings navigate urban food choices. For migrants, nutrition during this period highlighted pregnancy as welcomed and celebrated in all three migrant populations. However, despite different motivations and experiences of this celebration, the consumption of junk food and fast food were in common across the three populations. In contrast, migrants’ overall perspective on foods in Cape Town revealed a dominant orientation towards home and ambivalence towards foods they perceived as “unnatural,” “genetically modified” and “injected.” These perspectives were relevant to migrants’ experience of pregnancy, their overall, long-term nutrition, and the ways that migrants both resisted and embraced a new food environment.

In this chapter I also explored perceptions of food in relation to health, and argued that the prevalence of under-nutrition in the recent histories of migrant countries informed participants’ understanding of nutrition. This framework—in which one’s cravings were one’s best guide to health—may be problematic in the context of the extraordinarily rapid nutritional transition in low and middle income countries, compounded by migration. In these contexts, over-nutrition is rapidly becoming a major public health problem. While under-nutrition during pregnancy has public health implications that are worthy of consideration, the broader, long-term implications of obesity loom much larger (Abu-Saad & Fraser, 2010). In particular, for young children, the health implications of obesity—particularly in the context of consuming energy-dense, nutrient-poor foods—are potentially problematic. This potential susceptibility to obesity, as well as heightened risk of chronic disease, may be compounded by historical trans-generational experiences

of hunger (Veenendaal et al., 2013). Although this study showed the ways that pregnancy intersected with women's broader food contexts in Cape Town, further study is needed to investigate the food histories of both cross-border and internal migrants.

In the literature review, I documented the general paucity of health literature on migration between LMIC, and the specific lack of studies of nutrition in these settings. Cape Town is a microcosm with both ostentatious wealth and grinding poverty; it has characteristics of both a HIC and a LMIC. These tensions are true of many urban centres around Africa, though they may be less stark. The relative newness of the nutrition transition and the "traditional" diet of home give migrants unique sensibilities (e.g. perspectives on healthy, foraged foods) in relation to food supply in poor neighbourhoods around Cape Town. Migrants' consumption of processed, high-fat, high-sugar foods represents the confluence of poverty and marginality in an industrialized context. This nutritional profile during pregnancy becomes part of the reproduction of health inequalities, despite the presence of basic social services such as health care and education in Cape Town. Lastly, while participants discussed their cravings during pregnancy, migrants usually framed nutrition more broadly. As such, public health policy and research focus on the broad implications of the nutrition transition may be more important than a narrower focus on nutrition during pregnancy.

Chapter 5: Results - Infant feeding in the context of “work” and migration

Introduction

In this chapter I explore factors related to infant feeding from the perspective of migrant mothers living in Cape Town, as well as from the perspective of male migrants. The few participants who fed their babies according to WHO recommendations gave similar reasons for doing so, but more commonly, the reasons women gave for adopting other feeding practices were diverse. Family and community norms were intertwined with education, socioeconomic status and working conditions. These factors interact with migration, but are by no means unique to migrants.

In many areas of public health research, including maternal and infant health, the goal is to uncover ways to help people get healthy and stay healthy. However, in the case of infant nutrition, while there is ample evidence to support breastfeeding, there are also many different ways to facilitate good nutrition in children; not all of these ways are well understood. To this end, this chapter highlights three main themes in relation to infant feeding in the migrant context:

- In Part 1, I present the belief highlighted by all three migrant groups, of Cape Town as a place of work, and the ways that this notion was tied to women’s descriptions of formula feeding, the early introduction of solids.
- In Part 2, I explore the self-confidence women displayed in making feeding decisions in real-time, in contrast to Western literature that has investigated how breastfeeding has been elevated to a moral choice and where sentiments of regret and guilt are common.
- In Part 3, I argue that positive perceptions of formula use in the host country, South Africa, may be in part due to the focus in low-income countries on acute, rather than on the long-term health consequences of infant feeding decisions. As such, given the vast improvement of health services between most migrants’ home contexts and Cape Town, the arguments for breastfeeding that migrants are most familiar with- for example, less risk of diarrhoea- do not seem as important in Cape Town. The beliefs and norms of home are intertwined with these perceptions.

In conclusion, there is a need to focus on children’s long-term health and developmental potential. This shift not only involves broadening the public health discourse around child “survival.” It also involves recognising the very real contradictions and trade-offs involved in encouraging families to consider long-term health when they are in survival mode, or even facing acute threats to their family’s livelihood.

Part 1: Work and breastfeeding in Cape Town

When describing their decision-making around infant feeding women contrasted life in Cape Town with life in their home countries. One of the primary contrasts were between work life—and “busyness”—in Cape

Town relative to the “slowness” of life in participants’ countries of origin. To the extent this emphasised the role of work in the lives of Cape Town migrants, this finding affirmed studies that took place in the last ten years, such as that of McKinley & Shibley Hyde et al. (2004), which argued for a focus on the structural determinants of breastfeeding, particularly work. “Work” is a significant variable described in many studies from HICs impacting breastfeeding; in studies in multiple countries it may even be *the most* important variable (Arora et al., 2000; Fein, Mandal & Roe, 2008; Gatrell, 2007; Dearden, et al., 2002).

Perceptions of work shaped infant nutrition for migrants in Cape Town, even for women who were not employed. Moreover, even for recognised refugees, Cape Town was primarily described as a place of work, not a place of refuge. This categorization of Cape Town as a place of work is part of women’s broader self-identification as co-provider rather than primarily mother or wife. This self-identification also has important implications for gender roles, and the ways that gender roles intersect with breastfeeding (McCarter-Spaulding, 2008). Given that women’s work has been consistently under-valued in multiple settings around the world (DeVault, 1994; Coltrane, 2000), it is notable that participants’ definitions of work were revealed as broad, encompassing the work of the home. In this section, I first present women’s testimony of Cape Town as a place of work, then link these descriptions to their perceptions of breastfeeding and formula feeding.

Navigating family responsibilities

Across all migrant groups in the study, whether a respondent was working or not, “work” was repeatedly described as a dominant influence on infant feeding. Notions of “work” thread throughout all aspects of nutrition—and life—in South Africa. Participants described life in Cape Town as a scramble for resources, and often complained that their lives in Cape Town revolved solely around money, in contrast to home. For Somali families, who were largely formally recognised refugees with first-hand experiences of civil war, one might assume that they were in Cape Town more as a result of being “pushed” by circumstances such as war, rather than having being “pulled” by opportunities. Despite this, the tone of both individual and focus group discussions held these two processes in tension: women returned to Somalia because of lack of support in South Africa, described being in South Africa in order to “support family” (12S), and saw “sitting around and chatting” (23S) as being something people should *not* expect here in South Africa; rather, if that was something women wanted they should “go back home” (23S). This sense of South Africa as a work environment was accentuated by the absence of elder women. *Even if* women were not actually formally employed- which many women from all communities were not- the theme of work remained central to women’s descriptions of infant feeding, and their sense of lacking time to complete the tasks they were responsible for (i.e., formal and informal work, sending and receiving money, applying for social services and legal status, feeding and clothing their children). Exceptions to this were in secure living complexes with multiple Zimbabwean or Somali families (who had often found such housing because of xenophobia) where women sometimes spent extended time together, but even in these cases women still described their obligations to extended family.

A Somali woman who neither spoke English nor had formal schooling still presented herself as motivated

by the desire to support her family:

When in Somalia there was a war [referring specifically to the 2008 Ethiopian invasion], when the Ethiopians came, when they came we were under attack, there was shelling and other things, and we couldn't do our business there. So we fled. Our family scattered in different areas, and I decided to go to South Africa to support my family. Because I could not survive in Somalia, and I couldn't get peace, and so I decided to come to South Africa. So that I can support my family. But I cannot support my family now, I am stuck because I cannot get [a child support] award or anything.

24-year-old pregnant Somali mother of 1, 12S (Interpreter present)

This woman's decision to move to South Africa to marry was integrally related to both the Somali civil war and her desire to support her family. The move itself – it seemed to a husband she had no previous connection to—was in the interests of providing for her extended family back home. The child support grant offered to low-income households with formal residence status in South Africa is a very small amount of money (about US\$31 per child per month), yet it was mentioned by several respondents as a means of supporting not only oneself but also family members in refugee camps or back in women's countries of origin.

Co-provider, wife and mother

Given challenges including overcrowded housing and fears over safety, being a housewife in Cape Town would never look the same as caring for the home in Congo, Zimbabwe, or Somalia; a fundamental shift in identity was necessary. This was reflected in the physical homes of migrant women where most interviews took place. Predominately homes were single rooms, in some cases divided by curtains into a sleeping area and a living area. Typically, two parents and several children lived in this room. When asked how she liked living in her neighbourhood in Salt River, a Congolese interpreter—herself a mother of two young children—commented: “it's not good, it's not nice, but what can you do?” Indeed, there was a sense that circumstances felt temporary but beyond participant's immediate control. Shared bathrooms and kitchens were particularly problematic and involved negotiation with neighbours, and mundane tasks like washing and hanging clothes were time-consuming.

Housing in Cape Town is expensive relative to other African cities, and some participants described being unable to live in more affordable housing—particularly townships—for fear of xenophobia. However, in informal settlements where there is relatively less xenophobia, Zimbabwean migrants pay rent for shacks that are in imminent danger of collapse and which flood frequently. These shacks are illegal to rent out, but “landlords” exploit migrants' need for more affordable housing, as well as their lack of legal status in South Africa. Zimbabwean participants also lived in new development complexes in less popular areas of the city—the areas that were less connected to the city by public transportation, or had poor infrastructure. Somali women also lived in a range of accommodations, from illegally subdivided former factory buildings to secure apartment complexes. Secure complexes—arguably the most expensive and the homes of the more wealthy participants—sometimes looked like a cross between a prison and a motel, with 2-metre high electric fencing and about fifty units divided between three stories, making the complex appear quite large. Congolese participants lived in single rooms within larger buildings, mainly comprising groups of single

men and migrant families. Some migrant participants, identified as particularly vulnerable or victims of domestic abuse, resided in a women's shelter, where they were permitted to stay and undergo skills training for six months. It was within these physical realities that women defined themselves. Thus in both townships and in inner cities, migrants lived in extremely overcrowded conditions that usually felt temporary. Cooking was circumscribed by the availability of the kitchen and the appliances available there- usually a two-burner stovetop. Overcrowding, relative isolation and xenophobia seemed to contribute to women's sense of their lives in Cape Town as temporary. This sense of temporariness seemed related to women's decision to stop breastfeeding.

While women continued to orient themselves towards their nuclear and extended family's health and wellbeing, it seemed difficult for them to ground their work within the physical space of their home environment, because of the tenuousness of circumstances, the lack of space, fears over safety, and the perceived "busyness" of friends and family.

In interviews with Somali women, "work" was sometimes described quite broadly. For example, women might buy and sell jewellery or be involved in occasional transactions. One afternoon, I sat in a Somali store run by women that sold a variety of goods from imported spaghetti to clothing, and noticed the steady stream of Somali buying and selling various items, particularly gold jewellery. It was apparent that there were many different- often informal- ways of supplementing the family income, and of making do in Cape Town. Thus even if women did not have formal employment, they were continually looking for ways to supplement the household income, including through child grants available to those migrants who had official refugee status. While many respondents emphasized that a large number of relatives took on supportive roles in their countries of origin, in South Africa errands of any kinds were often far more complex, and were considered "work". For example, in Congo women described being able to ask nieces, cousins, or aunts to buy food, cook or clean on their behalf. In contrast, participants in Cape Town described having to travel to get food, stand in line to transfer money or go to Home Affairs to appeal their asylum status.²² All these pressing errands undermined women's ability to breastfeed.

There were exceptions and fluidity in women's self-identification. Zimbabwean women in particular self-identified as multiple things- they were simultaneously co-provider, mother and wife, both in Zimbabwe and in South Africa. Among Zimbabwean women with employed spouses, they described delaying re-entry into the work force in order to exclusively breastfeed and care for their new baby. This came at a cost: it usually meant relinquishing an existing job rather than applying for maternity leave, because most women's jobs (e.g. restaurant cook, domestic worker) did not come with maternity leave. At times, women described this decision at the same time as they described the absence of family members to care for the baby. Women described a strong emphasis on breastfeeding in Zimbabwe, which was reflected in women's childcare decisions. Women described shortened workdays back home in order to facilitate breastfeeding. It

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22 While some Congolese and Somali migrants had refugee status, many were asylum applicants or on other visas. Asylum applicants in particular are required to report regularly to Home Affairs. I did not ask about visa status explicitly, as this question could feel intrusive and potentially unsafe to the many undocumented migrants in South Africa. Nevertheless, many participants discussed nutrition in reference to the stress brought on by frequent visits to Home Affairs.

also reflects the economic circumstances of the women interviewed in this study, where some Zimbabwean women were financially able to give up their jobs in favour of breastfeeding, whereas others could not. Among Zimbabwean men, the participants emphasized their desire to support their wife and infant staying home, even if it involved “selling off the TV” (FGZM). For other Zimbabwean women, they valued breastfeeding until a baby had completed their vaccination schedule at eighteen months of age. In general, Congolese and Somali women in outwardly similar socioeconomic circumstances seemed less likely to breastfeed beyond the first few months of their baby’s life, and more likely to introduce formula.

For South African women migrating to the city for work, it is not uncommon for women to leave their children in the care of grandmothers, which in the case of Cape Town, often means that women are traveling between homes in the Eastern Cape and Cape Town. In contrast, for participants in this study—traveling much further to Cape Town—it *was* uncommon for women to leave their infant child in the care of elder women back home. This further complicates the notion of Cape Town as a place of work and the reasons and experiences migrants have for travel. For Congolese and Somali participants, political and documentation issues made travel home unlikely and infrequent. Even for Zimbabwean participants in the study the distance and cost of returning home was coupled with the stability of a predominant two-parent family unit, and family units usually remained together, and children were raised in South Africa. The boundaries of “home” and “work” were not clear-cut and linear. Respondents’ changing self-identification was important in their decision to introduce formula.

“Work” and the ubiquitous use of formula

In a city that was consistently described by migrant respondents as a “work environment”, formula was normative. The ways that women defined their roles and understood their circumstances in Cape Town were central to how women felt about breastfeeding: When women contrasted their own breastfeeding experiences with the breastfeeding practices of their mothers, they also contrasted their mothers’ role as “full-time housewife”, to their own roles as co-provider: “Back in the days our mothers were full-time housewives” (30-year-old Zimbabwean mother of three, 18Z). Participants seemed to distance themselves from the roles of their mothers’ and peers who defined themselves solely as mothers:

In Congo it’s easier [to breastfeed] because most of women there is not all the women who are working. [they are] not working they are just mother in the house....Sleeping... So they have that time...

28-year-old Congolese mother of three, 21C

Women spoke of mothers back home being able to breastfeed for extended periods because they were not doing anything else. There were some exceptions to this belief. The theme of expressing breast milk was a minor subtheme among Zimbabwean women, who considered expressing while they were at work but found it uncomfortable, impractical, or believed expressing to be physically dangerous. A handful of mothers had attempted manual expression, but no participants had used a pump. The cost of a breast pump may have been prohibitive and foreign. The issue of shift work was presented as another specific barrier by women who wanted to continue breastfeeding but worked rotating night and day shifts in petrol stations, shops, or

restaurants. Whereas women with set working hours could rely on their breast milk supply to be regulated by the hours they spent with their child, women who worked changing shifts faced engorgement no matter their shift, which led them to formula feed:

Ah! It's just irritating me you know the kind of work that I'm working night shift...
Sometimes she [daughter] is full and you know I have to cry a lot... [I'm] in pain and I want to sleep.

29-year-old Zimbabwean mother of three, 16Z

At times, rather than speaking of mothers in Cape Town *working*, the more poignant point was that women were *not* working back home. For example, for Somali mothers, participants described being “forced” to introduce formula because of work, yet there was disagreement in the focus group setting as to whether Somali women actually worked in Cape Town. Of the eight in-depth Somali interview participants the majority had never been employed. Thus the notion of being forced to use formula in the context of work was an interesting one:

R1: Here in South Africa it's a much more different case because they are working mothers.
So you are forced to introduce formula at a certain stage.

I: Because of going to work?

R1: Going to work and leaving the baby with the nanny.

I: How old are babies when women are returning to work?

R2: I don't know that women work!

[Disagreement]

R3: And the people work at night.

I: Ok, ok. Because at night the baby can sleep?

R3: Yeah.

I: Do a lot of women work at night?

R4: No. It's rare!

Somali women's focus group, FG9SW

A few women mentioned using formula in the context of leaving their baby briefly to run errands or spend a little time away, which seemed to fit within the overall theme of women having multiple demands, and formula feeding as an inherent part of navigating these demands. Women wanted the freedom to run errands and apply for jobs, and it seemed uncommon for women to take their baby when running errands. This increased the likelihood of introducing formula.

Men's perspectives on breastfeeding and family roles in Cape Town

When migrant men described their support of their wives during pregnancy and birth, they revealed a mix of paternalistic gendered perceptions and the willingness to change their roles in Cape Town. Pregnant

wives were both “like babies” (FG2ZM), to be admired for their endurance given circumstances in Cape Town (FG3CM), and to be tenderly cared for and protected during pregnancy (FG1SM). At the same time, Zimbabwean men used the terms “us” when referring to infant feeding decision-making, and Congolese men reported sneaking formula into the ward because as new parents, they felt their baby needed it. Some participants seemed to tentatively embrace new roles in making decisions around infant feeding together with their wives, though these roles sometimes presented a financial and emotional strain (FG2ZM).

Whereas women described their roles as wives, mothers, *and* co-providers and this seemed integral to the decision to formula feed or breastfeed, men never described their spouses as co-providers. When men discussed breastfeeding, they described the overall change from breastfeeding in their home countries to formula feeding in South Africa and they did so in abstract terms, highlighting the cost of formula, the difference in culture, and the loss that they felt. The change was framed as largely external- perhaps based on the surrounding norms, and “South African culture”:

R1: you know in my country, Somalia I think mothers, they used to feed the baby, breast feeding, we used to see a baby for three years, sometimes four years, is still sucking the mother. I say “mother, mother sit, I want to suck you” [laughter] breastfeeding. So in Somalia it was like that

R2: but I think that was everywhere

R1: When we come to South Africa we see the [Somali] mothers here, they changing a lot, how they want to... you get some of them are feeding one year, less than one year, a few months, you get one for three months, two months, you get one after 40 days will stop automatically then immediately and once she get a pregnancy that breast feeding will be cut...[] in between two child there might be nine months or one year

Somali men’s focus group, FG1SM

R1: there is a difference that I see in South African culture when it comes in breastfeeding and Congolese culture. We believe in breast feeding a lot because our children, even back home, here, our mothers, they breast feed more, you can see a child was up to the age of a year or a year and a half or two years still breast feeding. But here, it’s like a culture of milk replacing natural breastfeeding milk

I: and how do people feel about that?

R2: I think it’s not right, I think it’s not right, even the scientists they say, if you give the child more this, more of this artificial milk it gets lot of things, lot of problems and then it’s, the chances of that that bright intellect, the development of his brain is not properly, if I can say. Even myself, I do believe in breastfeeding more.

Congolese men’s group, FG2CM

but the thing is you know, here in South Africa is very different [from] home, I think in our country we prefer the milk from the mother to the child, but here you must spend [a] lot of money [on formula].

Congolese men’s Focus Group, FG3CM

Men from all three communities described the benefits of breastfeeding in much more specific terms than was described by women participants. In the quotes above, Somali men described the change in women's breastfeeding practice, implicitly juxtaposing Somali and perceived South African norms (FG1SM). Despite being expensive (FG3CM), there was an implied sense that formula offered some benefit, as the perceived norm amongst South Africans. However, men also felt that breastfeeding was "natural", and that it offered benefits to brain development (FG2CM). This testimony appeared to reflect a degree of romanticism and nostalgia of the strengths of an imagined past. It was a belief in something rather than necessarily a practice- when young fathers spoke about the use of formula in *their* family they described it as essential in their situation. Rather than describing formula with reference to their wife's responsibilities or overall gender roles, they spoke of life in Cape Town as fundamentally different. That is, Cape Town was not "home".

Formula as an affirmation of success in Cape Town

Cape Town was presented as a wealthy city, where participants found ways to earn enough money to support their immediate families and often also their extended families back home. Yet it was also a place where these same migrants were often undocumented, unemployed, living in crowded and substandard housing, and struggling to support themselves. In the midst of these contradictions and despite its cost, formula seemed to represent a way of affirming the former, more successful, identity. Formula was presented—though only in the abstract—as a status symbol:

They [friends] say 'no I can't breastfeed'. Me I didn't breastfeed because the baby didn't want....But the other people they do it like it's proud they say 'yes we got money I'm gonna buy formula'... 'I've got money I'm gonna buy Nido...Nan' [formula] you see? Other people they doing that.

30-year-old Congolese Mother of 3, 22C

As such, purchasing formula took up scarce resources- resources that might be used for food- yet it was perceived as a necessity in Cape Town. In contrast, formula back home was described as prohibitively expensive (2C). Formula was considered expensive by respondents from all three countries, and the "traditionally" early introduction of solid food in countries of origin was framed not as "tradition" but simply as cheaper than buying formula.

Yes, but my mom just said um...because "I will be there at home" and the formula is so...it was expensive by then there in Zimbabwe. So she was trying to economise...Maybe to give one bottle of milk and a little bit of porridge.

30-year-old Zimbabwean mother of two, 15Z

Many women felt that the reason that women breastfed more in their countries of origin was due to the cost of formula feeding, reinforcing the notion that the availability and affordability of formula in South Africa was one perk of living in Cape Town.

Stress and breastfeeding for Somali women

Lastly, the new roles that women took on were not necessarily welcomed or embraced by participants. The

use of formula by Somali women gave insight into women's experiences of stress, informal and formal work, and coping in Cape Town. Unlike Congolese and Zimbabwean women, for Somali women it was important that the Qu'ran advised breastfeeding for two years.

I: In Somalia when do people start food and how do they think about breastfeeding?

R: In Somalia mostly, mostly the baby is breastfed for two years. Actually it's not Somali culture it's a religion thing. In the Qu'ran that is, you're supposed to feed. The baby is breastfed [for] two years.

28-year-old Somali mother of two, 9S

Yet this knowledge of the teachings of the Qu'ran was not legalistic:

Actually [the Qu'ran] doesn't pressure, because if you have a problem, the Qu'ran is flexible, it's not "must" if you can't. If you can't, then the Qu'ran is not forcing you.

24-year-old pregnant Somali mother of one, 12S (Interpreter present)

Breastfeeding was highly praised, particularly by Somali men. Yet ironically of the three migrant populations, Somali women seemed most likely to introduce formula soon after birth, and stop breastfeeding entirely soon after. Women framed this decision in terms of their baby's refusal, or their lack of milk, rather than as their own decision. The decision to formula feed was forced on them:

R: I was anticipating to love to breastfeed. [...]

I: Did you expect to use formula?

R: No, I was not expecting to use formula, but since he is only using one breast, I have to give the formula.

I: So he refuses the other breast?

R: Yes. He cries!

23-year-old Somali mother of 1, 11S (Interpreter present)

Somali raised the issue of low milk supply much more strongly than other migrant groups. While several women spoke about their infants refusing to breastfeed, this "refusal" took place alongside the pain of unanticipated caesarean sections and lack of support during healing, the unintended consequences of the early initial introduction of formula, and the length of the queue at the clinic, which all factored into what was initially presented as a baby simply refusing breast milk:

R: He didn't want breast milk. He likes the infacare, he still takes those.

I: Could you talk more about "he didn't want to breastfeed"? Could you talk more about what happened?

R: When I give the breast, he doesn't take it. And I was getting a lot of tightness and milk, and ja, so I went to the hospital and they are giving me tablets, and then I was ok.. And then I stopped making the milk. I was not breastfed by my mother. I was born a twin with my brother and I was told I wasn't good at breastfeeding, I was told that my twin,

the boy liked the breast milk but I didn't like, so I think it's genetic things.

I: *So what did you drink as a baby?*

R: I was told by my mother that I used to breastfeed from a goat. So they used to give me the goat's milk.

I: *What did they tell you at the hospital to do when you were trying to breastfeed?*

R: They tell me I have got to [breastfeed] him, I have to bring [the baby] back...they want to train the baby to adapt to breastfeeding, but because of the operation...

I: *Oh, you had a c-section?*

R: Ja. I couldn't do the queue and there, and, I didn't go. So there was a problem with my son but I have also got difficulties, so I compromised...I was feeling the wounds and from the operation.

23-year-old Somali mother of 1, 6S (Interpreter present)

Somali women described their failure to breastfeed in terms of external forces beyond their control. These included physical illness, their infants' refusal of one or both breasts, lack of milk supply—which was sometimes related to having a baby via caesarean section, but often because of perceived lack of weight gain or crying.

For Somali women, the notion of stress and struggling to get by was an important part of their overall perception of the quality of their milk. The mainstream message in medical contexts around breast milk is that breast milk is nutritionally superior to formula largely independent of a mother's diet (Emmett & Rogers, 1997), often with the caveat that women seem "presumably well-nourished" (Jelliffe & Jelliffe, 1978). Yet in interviews with the Somali research assistant checking the interpretation of transcripts, she interpreted the lack of breastfeeding in cultural terms, and felt that participants probably did not cast breast milk as inherently superior; in fact, she felt that it was commonly believed that a mothers' stress is conveyed in breast milk, and would no longer be healthy for the breastfeeding infant. While women did not say this outright, they described their stressful lives in parallel to their experiences of having insufficient supply.

I: *Ok. Ja. Do you think it's common for women not to have enough breast milk?*

R1: It depends. Some of them it's natural, some of them they don't have enough milk.

R2: Mostly because of stress.

R3: Some of them they don't eat enough

R4: They don't have enough so they start with formula.

Somali Women's focus group, FG9SW

In individual interviews, every Somali participant provided some reason that breastfeeding, from their perspective was legitimately impossible or inappropriate from a young age (2 months or younger). Somali women presented breast milk supply as generally sufficient for a baby's needs, whereas others didn't have enough because they "don't eat enough" or "because of stress" (FG9SW). With the perspective of stress

as a potential cause of low milk supply, formula feeding seemed to have become the acceptable default feeding option for *all* Somali mothers. That is, Somali women shared a common and profound experience of stress—illustrated by the notion that there’s no word for stress in Somali yet women used the word freely in English—and trauma, which tended to be reported as psychosomatic illnesses (low milk supply) rather than expressed openly or collectively (Coker, 2004; Zarowsky, 2004). Indeed, stress is considered to be one of the primary ways that poor socioeconomic status increases levels of morbidity and mortality (Pearlin, Schieman, Fazio, & Meersman, 2005).

The issue of low-milk supply and infants’ refusal to breastfeed is in common with many studies of breastfeeding (Diong et al., 2000; McCarter-Spaulding & Kearney, 2001; Sibeko et al., 2005). This study expands on the ways in which perceptions of inadequate supply was grounded in experiences of stress, work, and, and lack of support. Somali women consistently sensed something lacking in their milk- either in supply or their child’s refusal- these narratives seemed to serve as self-fulfilling prophecies for other Somali women, who reproduced almost identical stories of refusal by infants. Whereas they were less likely to work outside of the home than Congolese or Zimbabwean women, Somali women’s inability to breastfeed seemed to be tied more strongly to the loss of the strong traditional identity of mother than to the gaining of another, work identity: female participants were usually not working, yet did not describe their identity as mothers, either. It seemed that the pressure to survive in an unwelcoming city overshadowed the priority of breastfeeding.

Implications: work and breastfeeding in Cape Town

For respondents from all three countries of origin, formal and informal work in Cape Town was central to descriptions of the widespread decision to introduce formula and solid food. Alongside the notion of work was the notion that life in Cape Town was tenuous and abnormal (i.e. in relation to legal status and housing): even if not currently employed, participants expressed a deep sense of loss, of being exiled from their homes. In this context, extended and exclusive breastfeeding was considered the domain of mythical “housewives” and women who could not afford formula in one’s country of origin. While previous studies have uncovered the importance of work in the initiation, duration, and exclusivity of breastfeeding (Fairbank et al., 2000; Fein et al., 2008), this study highlighted the ways that for migrants, the new city is itself a place of work, whether or not migrants worked in Cape Town.

Mixed feeding early in a child’s life affirmed women’s self-identification as busy women, allowing them to run errands, go to work, or seek work. However, early mixed feeding is also associated with increased risk of diarrhoeal illness for infants (Dewey & Adu-Afarwuah, 2008). In Western literature, breastfeeding is sometimes presented as a conflict between women’s roles as breastfeeding mothers and that of worker or wage-earner; while a child cannot exist or survive with a pregnancy taking place, breastfeeding is not seen as essential for survival (McCarter-Spaulding, 2008). In this study, it was apparent that work affected the ways women conceptualised breastfeeding- including work inside the home, informal and formal trading, and formal employment. Chapter 6 will investigate an additional dimension to women’s altered roles in Cape Town: the ways that women also experience the loss of the elder, non-working generation, and thus

even non-working women would take on the roles historically fulfilled by multiple generations. For women juggling multiple identities of mothers, wives and providers with little support from extended family, exclusive breastfeeding was perceived as presenting significant costs, without offering tangible benefits.

Part 2: Pragmatic feeding decisions

Intertwined with the sense that Cape Town was a place of work was the issue of malleability and pragmatism in making infant feeding choices. Migrant women in this study generally framed feeding decisions in terms of short-term, immediate circumstances. Whatever the underlying norm, which differed somewhat between migrants' country of origin, participants consistently described the introduction of solid food or formula primarily in response to a baby's crying, a perceived growth spurt or refusal to breastfeed.

Rather than being rooted in culturally or medically framed norms, women described decision-making primarily in terms of their reading of their babies' needs and cues. Unlike women in HIC who have been immersed in notions of the ideal mother exclusively breastfeeding or introducing foods in a particular way (DeSouza, 2013), most participants did not second-guess their decisions or have specific goals for the length of time they wanted to breastfeed or exclusively breastfeed. Moreover, public health notions of self-efficacy did not seem to be appropriate, since women did not define their efficacy by their feeding choices but rather by their own assessment of their infants' health (Bandura, 1977; McCarter-Spaulding & Kearney, 2001). In this section, I describe women's choices, highlighting the ways these choices differ from the literature around breastfeeding and formula feeding, and providing some tentative explanations as to where decision-making fits within women's day-to-day lives.

Participants did not usually describe feeding goals, norms, or preferences in terms of abstract beliefs on the medically recommended ways to feed a baby. While some women described the input of other mothers who lived nearby in feeding decisions, for the most part they described their feeding decisions in terms of whether or not their baby matched their expectation of normal sleeping or crying. Although some women had watched and helped with the raising of younger siblings or cousins, women did not talk about this experience in terms of their own mothering; rather women felt that they learned once they were mothers themselves. They arrived at motherhood believing that the nutritional needs of their babies were not necessarily the same as the recommendations they received in clinic. Women drew on specific signals- a baby's cries- rather than on universal beliefs, to determine feeding strategies:

I: Did anyone give you advice to start feeding her, when she was crying? Or did you decide by yourself?

R: It was the advice from [hospital name] was to breastfeed every two hours.

I: Ok, and then feed her food? Who suggested that you should feed her some food?

R: They [hospital] suggested that they [I] give food at six months.

I: Mm. The nurse said six months? So how did you decide at three weeks that she needed some food?

R: Because she would not stop crying. When I give her the food, she stop crying. If she full,

she sleep.

I: *Ok. She slept well. But [name of second child] didn't have food yet at that age?. What's different between her and [name of first child]?*

R: She's not crying too much!

32-year-old Congolese mother of 2, 2C

Among women who exclusively breastfed, they reported doing so mainly because their baby did not cry "too much" (2C). Some women exclusively breastfed one baby for longer than another because they saw breastfeeding as sufficient for small babies but not for babies with higher birth weights, or babies after one or two months of age. Thus respondents seldom described breastfeeding supply as regulated by on-demand feeding or as increasing as the baby grew; it was common for women to feel that when their baby grew, they would no longer have sufficient breast milk. Thus while breastfeeding remained the default feeding option at birth, solids and formula were quickly introduced as solutions to perceived problems, in response to a baby's growth, in response to crying, etc:

I: *Did you also feed her formula, or just breast milk?*

R: For two months I was just breastfeeding, and then after that I added formula.

I: *Why did you add the formula?*

R: By that time, the breast milk was not enough... The breastfeeding was not enough.

I: *Ok, you felt like you didn't have enough milk?*

R: Because she [baby's name] is growing, then breastfeeding only is not enough. She felt the baby has grown up now, so she cannot satisfy her needs.

24-year-old pregnant Somali mother of one, 12S (interpreter present)

For the feeding, they [Somalis] don't have a month... it depends on the personal [person]. So some people start feeding their baby as early as three months, four months... Some don't feed until after one year...

28-year-old Somali mother of 2, 28, 9S

As noted in the literature review, early mixed feeding is common in many parts of the world (Grummer-Strawn et al., 2008; Grassley & Eschiti, 2008; Crocetti, Dudas & Krugman, 2004; Fielden & Gallagher, 2008). Thus this high value on interpreting a baby's cues did not take place in a vacuum. For example, Shaw and colleagues (2003) and others have studied the ways in which a community's collective experience of food scarcity in the recent past makes women in that community more likely to favour excess food over risking that a child may be hungry. Other studies in high-income countries have presented the case that the ideal of a "fat baby" is associated with individuals of low socioeconomic class (Davison & Birch, 2001). This rang true in the Somali case, where the value placed on having a fat baby also meant that women were very likely to add formula at a young age:

I heard a number of people talking about ... advising people towards formula. To them,

breast milk is not enough. Not as in quantity, but as in nutritionally. A child using formula will gain weight much quicker than a child who is breastfeeding. Some understand the importance of breastfeeding so they might continue breastfeeding, but they add formula, supplement with formula. Because to them when a child is not ... when the degree of fatness is not fat enough, they freak out and they say... oh ok, my child is too slim what should I do what should I give him... they even ask in public... what did you give that child... he has nice body! I should give also mine! So they ask advice to anybody. And get not the right advice.

30-year-old Somali mother of 1, 23S

While the addition of expensive formula seems contradictory to notions of scarcity and the pressure of providing financial stability in tenuous circumstances, it speaks to some participants' perception of formula as a necessity in Cape Town. Other participants described adding formula casually for the sake of modesty or to run errands and did not place special significance on the addition of formula; it was a helpful tool for specific situations:

I: Why did you decide to add formula?

R: Like when I'm at church. Especially I don't feel comfortable to take my breast out in the public...Ja maybe when I went out in the public with many people...I'll go with the formula. Because even this formula [gestures to formula] I made it when you came; I went to the butcher earlier in the morning....So that's when I went with this formula... Otherwise I do breastfeed a lot....But when I go out...Where there are many people that's when I used the formula.

26-year-old Zimbabwean mother of 2, 14Z

I: Here in South Africa, do they [Congolese women] also breastfeed for two years?

R: Oh, no! They just follow the white people. [Laughter]. They don't like to take their breasts out.

32-year-old Congolese mother of 2, 2C

I: Why will you give it [formula] to her, do you think?

R: Because sometimes I want to go out... I can leave her with a lady.

32-year-old Congolese mother of 2, 2C

These descriptions were linked to women's migrant status in that they seemed to interpret a new need for modesty in South Africa, and were solely in charge of keeping the household running (see Chapter 6). When faced with individual circumstances, without a strong conviction that their milk could supply all the baby's nutritional needs for at least four-six months, they were likely to believe their milk supply to be insufficient. In the context of life in their home countries, participants affirmed the role of female family members in encouraging the early introduction of solids:

It depends on how you feed the child. Like my firstborn, he was 3.8 (kg), he was very big. And two days, when I give birth, he started to cry too much. Then, I was very young. I said,

“what I should I do?” and I grew up with my aunties giving her kids mielie meal porridge and I... and so I take mielie meal and I put in the cup then I take water and...thin water, and I cook it. Then I give the child the porridge, he sleeps. So I just realized then, ok, my milk is not enough for him, so every time, like when we are going to sleep, I feed my child. Four or five spoons. He sleeps. He doesn't cry.

(Zimbabwean Women's Focus Group FG8ZW)

In a single case, a mother who had previously raised children in Zimbabwe felt that breast milk was usually sufficient. Her reason for not supplementing with formula was not only that she felt that breast milk was superior, but also that she did not feel her family could afford it.

I think people have enough [breast milk] but you know the problem is; mostly women don't want to breastfeed...Because everyone who is willing to breastfeed has enough milk. So I think that also affects the mothers. If they...like me you see it [breastfeeding] irritates me sometimes I feel...So if I have money I think maybe I could have um...buy the...Formula but me I know that the formula; the breast milk is more important than the formula...So I'm just forcing myself but I don't want to do it. I'm forcing myself ...I don't want to breastfeed...ja... so its like that to all other women... They just buy formula. [...] I don't think the baby will just not like the breastfeed and just like the formula. I don't think that is possible, but most women I think they don't want to breastfeed. So they lie that the baby doesn't like the breast milk.

40-year-old Zimbabwean mother of four, 19Z)

Rather than frame their decisions in terms of what the older generation suggested to them, women expressed being a bit “more modern”; this continued to be shaped by what was “working for us”:

But I think things are now modernised now we just ...we just do what, there is no pressure about what, what um...What [to] do from like from the in-laws and our mothers. Now like everyone is bit modernised and now we do things a little bit more modern. Until we see maybe this one is not working for us. It's no longer about “who is telling you this...”

27-year-old Zimbabwean mother of 2, 17Z

Zimbabwean and Congolese women also contrasted the very early introduction of solid food with their preference for the introduction of solid foods based on their interpretation of a baby as hungry. However, these women were simultaneously sceptical of both their mother's generation *and* of medical recommendations. By focusing on what worked in the short term, many migrants were experimental in approach:

She was breastfeeding and supplementing other solid foods, so we were very introducing solid foods. The doctors were not... they didn't like it... they were discouraging us, but we, we used to find a way.

Zimbabwean men's focus group (FG2ZM)

But I know it was not a good idea, with the boy, because nurses advise you to either breastfeed, or feed with formula, but I was doing both and *it worked!* The baby was healthy!

28-year-old Somali mother of 2, 9S

When men described making decisions with their wives, they consistently described formula feeding or the early introduction of solid foods as the right choices for them:

R1: in my experience...I have never heard any information that, but you know, some of the things that are recommended I feel, that are recommended and prescribed at the doctors, some of those things, sometimes they don't have an effect or they don't work sometimes because they have recommend six months, I don't know how many months of breast feeding

R2: they say six

R3: up to two years

R1: ja...but what happens if you breast feed your child only six months, sometimes nothing happens

R2: [agreement] like mine, nothing happened there

Zimbabwean men's focus group, FG2ZM

In a Cape Town context, where, for all three migrant groups, large families or multiple adults were frequently occupying one room in a larger apartment, or one room in an unofficial residential building with rooms divided by drywall, there might not be much tolerance for a newborn crying or waking in the night. When faced with a crying infant, most participants described feeding their baby porridge or formula, and when they felt their child slept better, this affirmed their hypothesis that the child had been hungry and that their milk was insufficient. While studies have not found that infants who were fed cereal at a young age actually slept for longer stretches (Macknin, Medendorp & Maier, 1989), respondents consistently affirmed the practice as helpful in their case.

Increasing breast milk supply

Low milk supply is often related to insufficient feeding, scheduled feeding, or early supplementation with formula or other non-milk substitutes (Giugliani, do Espírito Santo, de Oliveira & Aerts, 2008). The reasons participants' gave for breast milk supply being sufficient or insufficient were mixed. Some women believed that the size of a woman's breasts determined the amount of milk they could provide their baby, but others felt this was not the case:

You can get someone with big breasts, and they have enough milk, and other that have small... this is the nature.

23-year-old Somali mother of 1, 11S)

Ja [tentative] I think so. Some they're going to be having... big... breasts... but they don't have enough milk. Will be... not enough//not enough// for the baby. Some will be having small like this [gestures to chest] but will be having a lot of milk. Or will be... a lot of milk. But without... which is not healthy... that the baby will be drinking... but quickly get hungry. Once again, once again...

Zimbabwean Women's Focus Group, FG8ZW

While many women felt that breast milk supply was basically inherent, women did describe foods that they could eat in order to either “bring in” their milk or increase their supply. Across all communities, *Stoney Ginger Beer* was recommended as a means to increase supply. Multiple women traced this practice back to Cape Town nurses’ recommendations. However, *Stoney Ginger Beer* is a product of the Coca-Cola Company, and is marketed across Africa. While it doesn’t actually contain any ginger, women consumed the ginger beer to increase milk supply. In some ways this reflects the nutrition transition, where a food that is traditionally considered beneficial, ginger, is replaced by an easily accessible, but unhealthy, substitute.

When asked about things women could do to increase milk supply, Somali women shared freely and quickly shot out answers, and yet these responses were foreign to women’s lives in Cape Town.

I: Is there anything women can do to get more breast milk?

R: Fruits.

R: Porridge

R: Tea with a lot of milk.

R: Eat a lot of healthy food! Don’t have stress!

Somali Women’s Focus Group, FG9SW

One woman spoke about the strong Somali tradition of presenting exactly these foods to mothers immediately post-partum (23S). The foods women were given post-partum to enhance recovery and breastfeeding back home were presented as integral to their own sense of self-efficacy in breastfeeding. In the Cape Town context, just eating “a lot of healthy food” or avoiding stress were expressed more as fantasies than as practical suggestions. Stress in Cape Town was seen as inevitable given women’s status as migrants, and lack of milk supply was presented as similarly inevitable.

I: Okay, what foods do you think are good for breastfeeding?

R: Me I like vegetables...You know they are vegetables they sell it by the market there err...We had that in Zimbabwe So it I like them.

40-year-old Zimbabwean mother of 4, 19Z

For Zimbabwean women, the foods that women talked about craving during pregnancy were also talked about in the context of breast milk supply, again in terms of preference rather than for health reasons. However, there was also strong traditions in all three communities around eating specific foods soon after labour (Congolese women less than others), and amongst Zimbabwean women, this was groundnuts and/or peanuts fried with plenty of salt and ginger. This was an area where women were most likely to draw on the influences of their mothers’ advice.

Me on the first day I didn’t have milk and then I phoned my mom who told my sister ‘that one has got to take peanuts; dried peanuts’.

30-year-old Zimbabwean mother of two, 15Z

Amongst all three migrant groups, milk supply was framed both as eating specific foods and generally, as eating enough food:

...sometimes I think sometimes it's the food... when she doesn't eat too much food nhe.
When she doesn't eat too much food you gonna see like the, the milk is not there.

30-year-old Congolese mother of 3, 22C

In an unusual case, a well-educated Zimbabwean woman had twins and received a lot of counselling and coaching from the hospital on breastfeeding. She was the only respondent to explicitly relate supply and demand:

R: Milk supply the more you feed the more you get the milk. I have actually proved... Because everybody said it couldn't be done. And then the breastfeeding counsellor at [name] Hospital told me herself..."There is no way your body cannot produce for two babies. Three babies I might say 'hmm' you pushing it..' But two babies you can do it. You give each child a breast and I promise you..."

I: *And was that encouraging to you?*

R: Yes and she told me the more you feed; the more it comes...And I used to feed these guys every two hours...On a two hourly basis they were constantly hungry. And I never gave up. And my mother-in-law is like 'my god you don't get tired of this?' And she would be sitting and I would sit with them... one here, one here. And then when they're done...'You don't get tired?' 'I don't get tired'. It's a case of persistence and how much can you tolerate. You have to have a lot of patience because it's a process; sitting and breastfeeding. It means you can't do anything else. You must just breastfeed so low supply is because you don't breastfeed.

30-year-old Zimbabwean mother of 2, 20Z

It is not clear from the literature whether insufficient milk supply is "real, perceived, or both" (McCarter-Spaulding & Kearney, 2001, p.515). According to Otsuka and colleagues (2008), perceived breast milk insufficiency is "the most common reason cited for the early supplementation and/or discontinuation of breastfeeding across cultural, socioeconomic, rural and urban settings"(p.546). Noting the relationship between breastfeeding self-efficacy and breastfeeding duration amongst Japanese mothers, the study argues for education and reassurance by medical providers of adequate milk supply (Otsuka, Dennis, Tatsuoka, & Jimba, 2008). In McCarter-Spaulding and Kearney's (2001) study of overall parenting self-efficacy and milk sufficiency, she suggested that mothers who perceived themselves as able to care for a young infant "also believed that they have an adequate breast milk supply" (p.516). This and other studies of self-perceptions tend to be premised on Bandura's theory of self-efficacy (Bandura, 1977), which assumes that women *want* to be effective at breastfeeding. However, this study seemed to suggest that while women were generally familiar with official feeding guidelines, their effectiveness as mothers was not necessarily tied to breastfeeding.

The literature surrounding the early introduction of solid food in populations in various settings around the world supports the notion that many individuals who introduce solid food early are aware of the official

recommendations. For example, in one U.S.-based study of parental beliefs and practices, 76% of individuals introducing solid food early knew and understood official guidelines (Crocetti, Dudas & Krugman, 2004). In a study of Kenyan women in slums, women introduced complementary foods “too early” (Kimani-Murage et al., 2011), despite two-thirds of the women in the study being aware of the WHO recommended time to initiate complementary feeding. Similarly, distanced from grandmothers and other elder women, while participants “owned” their approach to infant feeding in a new way, they did not embrace medical guidelines as truth. Like the Kenyan women in Kimani-Murage et al.’s study (2011), women in this study could recite the advice of medical providers (though occasionally this advice had been misunderstood) and had made decisions on whether this advice worked or did not work for them. While they expressed the loss that is wrought by migration and their tenuous circumstances here in South Africa, participants’ descriptions of nutrition during pregnancy and of feeding their babies were imbued with self-confidence. There was little sense of guilt, shame, or regret, even amongst the handful of women whose children had died or almost died of diarrhoea. Participants’ authority did not necessarily seem to be driven by their status as migrants, but this status accentuated the distance between migrants and health care providers (see Chapter 6).

This confidence is a departure from at least some of the mainstream breastfeeding discourse. Literature that is focused on breastfeeding as a personal choice tends to juxtapose the intention to breastfeed as compared to women’s actual experiences, which are sometimes in conflict (Larkin et al., 2012; Otsuka et al., 2008). Migrant women did not discuss internal conflicts over feeding decisions. While notions of the ideal, breastfeeding mother loom large in many western settings (DeSouza, 2013), participants in this sample did not subscribe to these ideas, and the sentiment of guilt over infant feeding decisions was almost completely absent from women’s stories. Rather, being a competent mother seemed to be more strongly associated with having a healthy, growing baby, and by providing for the family’s physical needs. Given the stress of attaining and retaining legal status in South Africa, as well as pressing socio-economic needs, participants generally focused on their infant’s immediate health and wellbeing, rather than on breastfeeding- much less exclusive breastfeeding- as a prerequisite to this end.

Part 3: A mix of formula feeding, breastfeeding, and solid food

In the previous two sections I discussed the themes of identity and work in Cape Town, and the theme of pragmatism. Whereas in the literature, women’s identities are often presented as intertwined with their ability to breastfeed successfully, participants in this group seemed to have a relatively relaxed attitude to breastfeeding; their identity did not seem to be deeply wrapped up in whether or not their breastfeeding relationship was successful. Many interventions promoting breastfeeding are premised on notions of self-efficacy (Bandura, 1977), yet in the case of this study, it seemed that participants were not invested in effectively breastfeeding. Rather, they were interested in having a fat, healthy, and happy baby, and perceived formula and complementary foods as tools to this end. In this section, I present migrant women’s explicit categorizations of formula feeding, their descriptions of mixed feeding, and the ways that these perceptions relate to the public health literature.

Many studies, recommendations and reports on infant nutrition in African contexts focus heavily on

the life-and-death stakes involved in exclusive breastfeeding: in particular, the number of lives that can be saved by exclusive breastfeeding (Bhutta et al., 2013). On the other hand, studies in high-income contexts have a longer history of focusing on the broader impacts of breastfeeding, on diverse facets of health from allergies, immunity, obesity and others (Gartner et al., 2005). Notable exceptions to this trend include a study of breastfeeding and allergies in informal settlements in Cape Town (Obihara et al., 2005). In this section I propose that the message of the former- acute care- literature is familiar to migrant women in Cape Town, whereas the message of the second literature- about long-term health- is unfamiliar but potentially compelling. I argue that the reason women think of infant feeding in terms of “what works” in the present, is that for a long time, the WHO recommendations and interventions- in both infant nutrition and more generally- have dealt with acute problems in low-income countries. In this light, it is not surprising that migrant women focus on the short-term health of their infant, nor that, confident of the health system in South Africa, they respond to their child’s perceived needs with the use of commercial formula and solid foods. That is, women no longer feel that breastfeeding will save their child from potentially deadly diarrhoeal disease.

For most mothers, the benefits of breastfeeding were abstract, and the negative consequences of introducing formula or complementary foods early were non-existent or not well understood. In one focus group with Zimbabwean women that took place in an informal settlement, several women reported breastfeeding exclusively until their babies were six months of age. It is notable that exclusive breastfeeding seemed to be the domain of the poorest women in an informal settlement, which is in common with studies in other parts of the world (Bryce et al., 2008).

However, there was a notable silence about why women would exclusively breastfeed. Rather, they described breastfeeding exclusively because the baby “wasn’t crying too much.” The norm, as I perceived it, was so much in favour of the early introduction of solids (when a baby was just days or weeks old) that exclusive breastfeeding needed to be justified. In contrast, women voiced agreement over stories of babies who cried until they were given porridge then slept well after porridge had been introduced- when one woman in the group would share such a story, others would chime in in agreement. When questioned about the negative consequences of the early introduction of solids, mothers and fathers generally did not perceive any reason not to introduce solids:

I: Is there any reason why a woman wouldn’t introduce food? Why you’d wait until later?

[silence- a few seconds long]

Do you think there would be any reason to wait to introduce food?

R1: Ja. Some women... they say ... you mustn’t give food at an early stage because... in breast milk there is everything... they get everything... water... everything... food...

I: So... so... um, does anyone feel like something would happen if you added, like did you feel there was any negative effect from starting the food?

All: No!

R2: One day you start to give the porridge, cereal... he get’s fat... []... you go you find he’s 10kg, next month you see he gets one more kg. [Laughter] so you see breastfeeding is

maybe not enough for him. But if you give the porridge he may [grow quickly].

Zimbabwean women's focus group, FG8ZW

maybe two months, like my sister, my eldest sister, my eldest sister's child, 2nd child, he at his second month, coz he was crying a lot and now they give him this, still crying, breast feeding, still crying and the mother came, our mother came and said, 'uh huh you are just killing the child man, just give him some pap.' Then we give him pap, when he ate pap then the child slept, finished, and that was the end of it, carry on, let's go!

Congolese Men's Focus Group, FG3CM

Participants from all migrant groups described water and food as traditionally added to a baby's diet as early as a few days or weeks old, both in the context of celebration and as one response to their baby's cries:

R: the first one is born, my mother put chicken, take the liver, scratch and give to the baby.

I: *and how did she like that?*

R: yea, [eating noises] and she just three or two days old... lot of mom, I [we] do that, so [eating noises] they having just one day, because when you get a baby from the maternity, they give you chicken to welcome you, so when you eat chicken, they take that meat from that, scratch [a little bit off], and [eating noises]

I: *is there a particular reason they give the liver*

R: the liver is a specific food for baby because for them liver is not so hard, the baby to chew...all my little girls, we've done that

40-year-old Congolese mother of 4, 13C

In all communities, solid food was one potential resource from the beginning of a baby's life. The early introduction of solid food is not unique to this population (Mostert & Steyn, 2005), and participant's feeding practices themselves were not culturally or geographically unique. Rather, this study added depth of understanding to the ways that women made the decision to add solid foods in the overall contexts of their lives in Cape Town, and despite the recommendations of nurses and doctors.

There were rare exceptions to the focus on the short-term benefits and costs of breastfeeding, formula feeding and feeding solid food. One sentiment that seemed contradictory involved understanding illness in terms of lack of breast milk:

R: But I think after I stopped the breastfeeding she get sick...Like look...All the time sick.

I: *Mm...Do you think it's because of the formula?*

R: Yeah because you know my first-born he was drink[ing] breast milk two and a half years....You see? He's never sick.

27-year-old Somali mother of 3, 10S

One woman had had a significant experience that had profoundly affected her. She had previously considered diarrhoea a normal part of infancy, but decided to consider the perspective of her doctor in Cape Town who told her not to give her infant water.

The first one, I go to the hospital, they say I must stop to give him water...me I say "hmm mmh!!", I say "I must do the way I always do for all kids." I give him water, I give him this and after the child had diarrhoea- too much! I say let me experiment those things they said in the hospital, don't give water until three or six months... and really the child didn't get sick before six months....when I give, the way the doctor explained to me, he say when you give, when you breast feed it's a meaning that your milk is enough water for the baby.... when you give more water it's like you give...too much so that the baby can get diarrhoea too easily, so while I, for the first one I said no, the first I make experiment I didn't want that the doctor tell me, I say hmm mmh, I'm a mother, I already have 3, but when I give water, I just do experiment to see what's really doctor say it is a really true.

40-year-old Congolese mother of 6, 13C

For another mother, she changed her understanding of the early introduction of solids in response to the advice of a trusted family member studying nursing- even though the family member was younger than her and not a mother.

R: Mostly six month [of breastfeeding] but you know people in the rural areas; if the child cries they just give food... even one month... they do.

I: *'Cause usually when a child cries that's a sign that they are hungry? Is that why?*

R: Yes people think that but I don't that they...because this one now I know. You know my other three I was young. I didn't realize some of these things but now I can see; like her she cries much um...From birth and she was trying to eat even her arms, her fingers. Um...so I though this my breast is not enough for her. I wanted to give porridge also. And there is my brother's wife she is doing nursing by UWC there. She said they taught them that she...that's why the kids have stomach problems. We introduce food to them early....So it will disturb the...So I stopped. Then I didn't give porridge then I breastfeed her for almost a month and half and she was okay; now she is okay, she is not crying, she is not hungry. I think there is something when the baby comes out...she...she needs to adjust so...We don't need to give her anything I...

I: *So it was just because she...she was crying because of needing to adjust...?*

R: Ja, of the new environment and...I think it is not...because there is another lady we... were together in the same ward when I was having her. She said she gave her porridge already. And...Now she [the baby] doesn't like it [breast milk]...So I think the problem is we do it quick. We have to let the baby adjust with only breast milk .

40-year-old Zimbabwean mother of 4, 19Z

These two examples highlight two slightly different points about the willingness of mothers to change their practice in response to new information. Both women used concrete examples to ground their experience, but one woman took the advice of a trusted relative, the other the advice of a doctor. Similarly, older women who had given birth in their countries of origin seemed more willing to question whether their practice was "working". I suggest that this willingness is grounded in greater experiences of infant illness and "normal", in both their home countries and South Africa. Even in these exceptional cases, choices revolved around short-term implications of a certain type of feeding, rather than on long-term implications of nutrition decisions.

While breastfeeding was universally understood as very important, women did not usually describe *why* it might be important, what benefit breast milk might have for the baby, or what harm might arise from formula feeding. In fact, only in the very few cases where women exclusively breastfed for any length of time, or breastfed beyond one year, was breastfeeding described in detail. Participants usually did not perceive breastfeeding as at odds with formula feeding, they perceived the two to be complementary.

It was a rare occasion when a breastfeeding mother described in detail the recommendation to breastfeed, which she set against her own family's norm:

I: How did you decide to breastfeed?

R: I think err...It's the thing that our mothers do and they encourage it they say it's good; and also like the books everything now they encourage breastfeeding. They say like six months breastfeed exclusively though we don't like the six month guide to breastfeeding. But then we give breast milk it's, it's, it's healthy it has got a lot of vitamins and also helps the sucking action; the baby's jaws and stuff.

I: Okay, so um...You said, you said, you were told six months but people don't reach to six months?

[Laughter]

R: Yes especially when it's boys they will kill you if you breastfeed them. Their demand is too much.

I: Mm... So what do you think most women do?

R: Will breastfeed maybe for three months then we start giving them a bit of Cerelac then err...Maybe we mix with err...Formula.

27-year-old Zimbabwean Mother of 2, 17Z

For Somali participants where the majority of participants used formula, there was a sense that formula should not be presented as prohibitively expensive:

I: Were all these baby foods expensive for you?

R: It [baby formula] was expensive, but not that expensive. Like, R220/month, something like that. I used to manage.

24-year old pregnant Somali mother of 1, 12S

I: Because everyone can afford it [formula]?

R: Everyone can afford it. However much they are not well off, normally, they can afford. Anything to do with eating, believe me, they can afford. However much help they can get... as long as they don't sleep comfortably, or doesn't have nice houses... but they have to eat.

30-year-old Somali mother of 1, 23S

Formula feeding was also favoured for its own sake, primarily because it was perceived to extend infant sleep and help a child gain weight more rapidly than with breast milk alone. The introduction of formula

was often related to the desire for a sleeping, contented baby:

But then formula is a bit sustaining if you see if a baby finishes a whole bottle of formula. It's going to sleep for quite a long time; but then breastfeeding in small amounts and the demand is like breastfeed now a few minutes later he wants to breastfeed again... So I think formula makes them more full.

27-year-old Zimbabwean mother of two, 17Z

Migrants' positive perception of formula was somewhat in contradiction to the nostalgia with which women described natural foods from back home in Chapter 4. This tension seems inherent to migration, urbanisation and perceptions of modernity: On the one hand, women valued the convenience and relative affordability (as compared to migrants' home countries) of formula as well as, at times, the ways that access to formula presented status. On the other hand, respondents mourned the loss of their home through the loss of food traditions.

Lastly, while participants did not discuss or perceive the costs of introducing formula, these costs were apparent in analysis, even in the short term. The decision to introduce formula and solids had unintended consequences: For example, introducing formula often led to their baby's complete refusal of breast milk (23S, 10S). It was common for women to say: "When I start to [add] formula he liked the formula not the breast milk" (27-year-old Somali mother of 3, 10S). Low quality plastic bottles with high-flow nipples made formula feeding easier than breastfeeding for babies, and the very common decision to supplement with formula was often followed by the complete cessation of breastfeeding. Some women estimated their family income in the course of our conversation and the expense of formula, and while not raised directly as an issue by most women, comprised a significant percentage of many family incomes. Some women spoke of feeding their baby more solid food than they would otherwise, to try to minimize their use of formula.

Conclusion

This chapter has discussed three dominant themes important to infant nutrition in the context of migration to Cape Town. Firstly, I discussed women's feeding decisions as revolving around their perceptions of work and financial obligations. Extended breastfeeding was often framed as a practice of women with nothing else to do, or with no money to introduce formula. Women weighed other roles as more important than their breastfeeding role.

Secondly, women described doing "what worked" rather than necessarily following the advice of doctors, or of family tradition. This decision-making process seemed highly contextual, but also presumed the usefulness of formula and solid food early in an infant's life. Breastfeeding was not perceived as all-or-nothing, and women in general focused on balancing the needs of their baby with the needs of the family in the short-term. This role was affirmed by the perceived benefits of formula: weight gain for the baby and relative freedom for the mother. In light of these two themes, exclusive breastfeeding would involve a leap of faith for many respondents in this study. For migrants from all three countries of origin, not unlike South African women, notions of exclusive breastfeeding were foreign and only introduced by medical professionals.

Embracing the notion of exclusive breastfeeding would involve embracing the advice and mind-set of health care workers. Where women present themselves primarily in pragmatic terms, it is important to explore the ways that breastfeeding might also offer solutions to the problem of a baby's cries, as well as the social context that makes it difficult for women to remain with their infant to exclusively breastfeed.

Thirdly, women's focus on the short-term health of their child is not surprising given the focus in most low-income countries on acute health needs. Widespread recommendations in LMIC have up to now been disproportionately focused on the relatively short-term importance of exclusive breastfeeding for stunting and diarrhoeal deaths. While women generally knew and understood official infant feeding recommendations, in the short-term, women largely saw no ill effects from the use of formula or the early introduction of solid food. Thus the short-term importance of breastfeeding faded for migrants in Cape Town, where they perceived that their infants could gain weight and thrive with a variety of foods, including breast milk, formula, and solid food. Access to a variety of foods- particularly formula- was a source of pride. As in previous studies of infant feeding, women did not necessarily believe or apply health messages they had heard (Haider, Kabir & Ashworth, 1999; Kimani-Murage et al., 2011). Women were also generally less aware of the long-term benefits of breastfeeding on the health of their baby. The next chapter will explore in more depth the ways that the absence of family accentuated this sense of Cape Town as a foreign environment, and the ways that this is intertwined with migrant maternal and infant nutrition.

Chapter 6: Results - Sources of support for migrants in Cape Town

Introduction

In chapter four, I explored migrant women's longing for foods from home: how these longings pointed towards the ways that the nutrition transition is "lived out" and health navigated in the context of migration and pregnancy. I argued that the nutrition transition is integral to maternal and infant health in low-and middle-income countries, and is a way in which health inequalities are perpetuated along economic lines. In chapter five, I described the ways the Cape Town work environment, self-described pragmatism, and the infant feeding policy recommendations in LMIC focused on acute illness and stunting, all intersected with infant feeding choices in Cape Town. While I drew on existing literature to strengthen and contextualise findings, chapters four and five were not explicitly theoretical. Rather, they were primarily inductive. In contrast, in this chapter, I reflect on the ways that the theoretical framing of social capital addressed in Chapter 2 provided insights into participants' experiences of maternal and infant nutrition.

This chapter situates the results of this study with respect to the specific types of support cited in previous studies of maternal health, namely (1) practical support, (2) cognitive support, and (3) emotional support (Adams et al., 2002; Aubel, 2012), and makes sense of the limitations of these categories in a migrant setting. The theoretical framing of social capital hinged on the idea that the health profile of a migrant is likely to be different from non-migrants in the ways in which community and family change in the context of migration.

While much of the existing literature on connections between members of Diasporas focuses on the ways that these connections are *sustained* (Njanjokuma Otu, 2012), the dominant theme in this research population was on the ways that relationships were *limited*; women primarily described their isolation in Cape Town. As such, in this chapter I explore the way participants described the role of family in their countries, as well as in South Africa, in the maternal context. I also discuss the ways that migrants' sense of isolation was compounded by negative experiences in healthcare settings. Finally, I suggest that professional interpretation services are central to improving migrant experiences in health care settings and thus providing better care and more appropriate health promotion messaging.

Migrant maternal and infant nutrition and social capital

The concept of social capital can be defined in terms of the value conveyed by participation in networks (C. Campbell, 2011). There have been many ways of defining and strengthening the theoretical construct of social capital, including parsing social capital as an individual versus as a group characteristic, and differentiating between the sense of reciprocity and trust that people *feel* vs. what people *do*- the extent to which they are members of groups (Putnam, 2000). This chapter focuses on how migrants connect their own experience of social support to maternal and infant nutrition.

In Chapter 2, I highlighted the importance of grandmothers and elders in maternal and infant nutrition,

particularly in LMIC. However, this role is not well understood in the context of migration, and particularly in the absence of grandmothers. In the migrant context, exploring the ways that decision-making power has shifted from elders to migrant mothers offers insights into the ways that maternal and infant health is navigated in the context of the migrant family and community. Thus it offers insights into both migrant and non-migrant populations and allows for better-informed public health interventions as well as potential avenues for quantitative study.

The Role of family

The role of family in countries of origin

For study participants from all countries of origin, women seldom conceived cognitive support alone, nor were the roles of family described in authoritative terms. Rather, in reference to Aubeil's (2012) description, cognitive support was nested within a much broader set of supports, primarily practical, and to a lesser extent, emotional and affective (p.27). Women often described family support back home rather than describing feeding choices. The experience of nurturing- rather than the nutritional choices themselves- became the focal point of the maternal period for participants from all three countries of origin.

Rather than describe the authority or decision-making role of family members, participants described support within their overall life lived together with their family. In migrants' countries of origin, participants reported that mothers and to a lesser extent, mother-in-laws and other relatives, played a central role in supporting women in caring for their babies, particularly for a woman's first child. This role was highly gendered and was generally a woman's domain:

Now the other thing is, you see mostly the first pregnancy, you see at home when a woman get her first pregnancy, there's a kind of undergoing training with the pregnancy, mother actually explaining to her 'look here, this is not a sickness', because most of the young ladies they think when they're pregnant they're sick. They're explaining to her, 'this is not a sickness, you must work, you must do this, you must do that. Don't put yourself down, don't lay down otherwise the pregnancy will take you instead of you carrying the pregnancy', ja.. So now, a little bit difference here because they're on their own but I really encourage them sometime and I admire them because when they put in this circumstance, they are on their own, then you have to do some[thing] and comfort them as well.

Congolese men's focus group, FG3CM

However, this notion of "training" was put forth by a participant in the Congolese men's focus group rather than by women participants. Women did not frame their losses and longing in terms of "training" or with reference to their mothers' advice. Both men and women had in common their descriptions of the loss of support post-birth, which for women were primarily described in terms of the loss of physical, day-to-day help:

...Back home after the baby is born then the parents are there, sisters and brothers are there, then you get the whole family coming to help, you know come and clean and do this and do that, wash the baby and everything. But here, she doesn't have experience of washing the baby, but she has to try and you come back and she can't, like my one she was,

she went through Caesar, she can't cook, you know she can't lift heavy stuff, then you come back from work you have to start doing everything, cooking, doing this, doing that and ja, so those are difficulties we experiencing...

Congolese men's focus group, FG3CM

[one] of my friends she come from Somalia; but she go back...She bring twins....So she say here 'nobody can help me'... so she go [back] to her mother.

28-year-old Somali mother of 3, 10S

If they remained in their countries of origin, Congolese and Zimbabwean respondents would traditionally return to their maternal homes to give birth, and receive practical support not only from their mothers, but also an extended network of family, younger cousins and siblings:

You see... I suffer I suffer a lot. You see there in Congo if you give birth you are married... But if you give birth your first child you must go back to your family. It's not a divorce... But...But you must go back your family...So you, you gonna to start sleeping; your family must take care of the baby, your family must bath the baby. Your family must wash the clothes for your baby even when the baby is eight months, six months so...

30-year-old Congolese mother of 3, 22C

Thus household support in their home countries was presented as practical, cognitive and emotional. It was intertwined with the high rates of unemployment in home countries and methods of childrearing, as well as with community norms:

You see even if like she has a church where she's a part of a church, you'll see they will give even the announcements to the church – look we've got our sister, she has a baby now, we have to go and visiting him, so we can't go hands empty, so we have to bring something to her, so they will just collect something for her, so they will bring something for her and you'll see all, even the whole month I can say, people got enough time because they're doing nothing, they can come, someone can come stay there from morning till late, even sleep there, spend even two days or three days, even a week, because they've got enough time. So here we've got a problem of time, so we spend too much time at work and most of our families are there, we left them far away in Congo

Congolese men's focus group, FG3CM

R1: If you have baby, there's some people...they come to help you because you can't do anything, you had baby [...]... so you're supposed to call your family or your sister to come to help you. Even one week or two weeks

R2: come to you, your home

R: [laughter] in her case, she's saying she's going to give example to what's happen to her in, when she gave birth it was so special, they took her with a special care, before she comes from the hospital they have to do her hair, bought new clothes for her to come out. Then when she came out from the hospital there were many people to help her with cooking, if she want to touch that they will say 'no, don't touch that, you are a new mum,

don't touch that you are a new mum.' So they take special care, took her to bath her, to ... ja, that's what they do

I: okay, do you think it's similar in South Africa

All: no!

R1: in South Africa you are alone, suffering

R2: you are alone in the hospital

R3: cooking, do everything the house

R4: [back home] they come to fetch you at the hospital, they come with the car, the people they dressing nice clothes, they come like far that they waiting, [at the hospital] ja...

Congolese women's focus group, FG4CW

For Somali women, while they did not describe returning to the maternal home after the birth of their first or subsequent children, birth was considered a massive undertaking; one participant described this as women not being expected to “lift a finger” for months postpartum (30-year-old Somali mother of 1, 23S). For Somali women, the role of family support is further complicated by women's experiences of war and trauma, which means that few women have first-hand experience of this support in Somalia. Rather, Somali participants from urban or camp settings in Kenya remembered parts of the maternal experience, but these memories seemed possibly quite distanced from the mutual obligation and support within a closely-knit community. They therefore described past support, but did not describe past obligations. Moreover, romanticized memories notwithstanding, participants' experiences of community support were not all positive. The pressure and obligations that came with family was at times perceived as overwhelming, and in the context of nutrition, excessive:

[...]You have to eat.. And you wish you did not even [have to] ... they pamper you with a lot of food and meat and if I was back home I'm not sure if I would have managed that.

30-year-old Somali mother of 1, 23S

Ja you know the difference... between Somalis and... I'm not sure about others... when you are at home... home home, I mean Kenya or Somalia... a woman when you are giving birth the woman is being treated like a special vulnerable person. So you don't even wake up from the bed. So you don't do anything... feeding the baby, holding the baby... they give you a lot of soup... milk tea... literally you ... you are being offered a lot... so that's what I think they [other Somali migrants] miss. You know for me... of course, we all want to be pampered and taken care of ... but I didn't feel like I was missing anything much. Because I understand the pressure of drinking that soup, milk and the rest... they will kill you with those stuff... but in no sense is it good for you health... that's how you end up being obese. After delivery they end up gaining weight. With a big margin than any other person. But if you are brought up out of traditional African society, then you'll understand that ... after giving birth... you're just as normal as the others...except maybe a wound or something you need to take care of... but the rest... I think you can manage. For them they take it as they are literally crippled ... which I didn't feel anyway the same. The first two or three days... after hospital, I was sitting... and washing the baby... doing the washing... stuff, cooking.

We were doing everything together. Helping... some things I can't do but the rest I can do, when I'm standing ...

30-year-old Somali mother of 1, 23S

Amongst participants from all three study populations, the traditional role of family postpartum in doing all practical tasks was extensive. Women perceived themselves as in need of major support after birth. Participants, therefore, presented pregnancy, and early motherhood as the embodiment of how relationships with friends and family worked “back home” indicating their sense of loss of these relationships in Cape Town.

The role of family for migrants in South Africa

For the participants in this study, the kinds of household supports- the nurturing described in the previous section- that participants remembered from “home” were largely absent. Informational support- advice- did not have authority when grandmothers were distanced.

1. Physical absence of extended family

For a handful of Zimbabwean women, their mothers or mother-in-laws did come to stay for several months after the birth of their children. However, despite relishing this presence, they still considered themselves “alone” and framed their lives in terms of work- perhaps even more so because of the visit of their mothers or mother-in-laws, who at times facilitated their early return to work. This presence of extended family amongst some Zimbabwean participants represented the exception, and most participants from all three countries of origin described the post-partum period in terms of the absence of family and lifelong friends.

2. Limited connection to extended family via phone and text messaging

In light of their physical absence, the influence of elders via phone or internet were a potentially important source of knowledge, support and influence for migrant families. Indeed, in previous studies of social connectedness of migrants in both HIC and LMIC, including South Africa, contacts between home and the new country were many and varied (Njanjokuma Otu, 2012). This led me to anticipate that participants might be receiving advice via phone or via the internet. However, while the issue of remittances was raised by participants in terms of putting strain on household incomes, the much more dominant issue raised in relation to families in country of origin was that of limited contact. Interestingly, in a previous study of breastfeeding and social capital among Puerto Rican migrants in the United States, remittances were *not* associated with breastfeeding initiation, leading the authors to conclude that this financial connection operated differently than other kinds of connection, which *were* associated with breastfeeding rates such as the giving and receiving of services (Anderson et al., 2004).

In this study, most participants reported that they did not travel home regularly and that phone calls tended to be brief and to-the-point because of the cost involved. Internet use was generally not a mentioned option, despite the ubiquity of smart phones and Internet cafes in Cape Town, perhaps because women did not usually have smart phones, airtime for phones, or the time or money to frequent Internet cafes. What advice women did receive from family members could be viewed as general and vague: “Be nice to the

baby! Take it easy” (28-year-old Congolese mother of 2, pregnant, 3C). Women largely described being in brief, sporadic contact with family members back home. This could not simulate a relationship that would generate meaningful advice:

I: Do you talk on the phone with people in Somalia or Kenya?

R: Yes.

I: Do they ever give you advice?

R: She say the airtime is so limited, we always ask the most important questions, ‘how are you’, ‘what is your situation’, and other things, so you don’t have enough time to have lessons.

I: Yes. Yes. Are there any older Somali women who give advice to younger women?

R: No. Most of the women here are young.

26-year-old pregnant Somali mother of 5, 8S

I: How are you doing in Cape Town? Do you like it here?

R: I miss home! I miss my brothers, my sister.

I: Tell me more. Do you speak to them on the phone?

R: Yes.

I: Did they give you any advice now that you are pregnant?

R: “Be nice to the baby! Take it easy!”

I: Did they tell you to do anything special to take care of yourself?

R: I’m not really calling them, it’s too expensive. They are happy that I’m pregnant.

28-year-old Congolese mother of 2, pregnant, 3C

The kind of advice given in these phone calls seemed to basically affirm the bond between family members, rather than provide a space for advice to be shared or engage in discussion over issues of mutual importance.

As an exception to this theme, the early introduction of solids by Zimbabwean women tentatively affirmed the role of older women in reinforcing cultural practices from afar. For example, this woman received advice by phone:

Ja. I phoned my grandma. Back home. And I told her about the crying of the baby.. And she... asked me about the weight of the baby. When I gave birth. I told her that the baby was 3.3[kg] like this. He was big. So she said, it might be hunger. She said I must just try for one day and see... if it’s hungry or... //something else// ja. So I tried one day. She told me to try one tablespoon of cerelac²³ and put a lot of water there. Then I give the baby. He sleep the whole night.

Zimbabwean women’s focus group, FG8ZW

.....
23 Cerelac is a brand of Nestle baby cereal.

This issue of limited contact with family is interesting because in some ways it contrasts with migrants in high-income settings. Amongst migrants to high-income countries, communication appears to continue and influences and connections remain strong (Lindley, 2009). Despite being physically closer to family than African migrants in Europe and North America, migrants seemed more distanced than their counterparts in developed countries; for migrants in South Africa, the cost of phone calls was prohibitive and Internet was not available to many participants. For at least some Somali women participants, text messaging was also unlikely because they could not read and write. Moreover, many women were completely financially dependent on their spouses; male migrants seemed to generally have airtime on their prepaid mobile phones, whereas women seemed to have to ask to call family.

Previous studies of the role of grandmothers in non-western societies have emphasised the “authority” of elder women, and mothers’ relative lack of autonomy in making feeding choices (Bezner Kerr et al., 2008; Aubel, 2012). In contrast, this study offers important insights into the ways that this “authority” is intertwined with a respect for older women’s role in overseeing the practical work of the household: with cooking and cleaning and caring for young children. Some examples of this loss of support are described in the next section.

3. Loss of social support

For the migrants in this study, it seemed that it was largely historical and cultural memory that renewed and dictated nutritional practices, rather than on-going contact with elder women in the home country. Where participants received advice on the phone, this advice was not based on actual experience of migrants’ realities. Rather, it emerged from the physical, social and cultural worlds of the advice-giver back home. This speaks to the ways that many migrants made feeding decisions based on specific circumstances- such as a baby’s perceived hunger cries (Chapter 5). In a completely new setting, the role of extended family in Cape Town in providing cognitive support- or emotional or affective support from a distance- was very limited. While literature focuses on the extensive connections between members of Diasporas, most Somali and Congolese women never visited home, because of both cost and their immigration status (refugees may not return to visit the country from which they fled without losing status). Zimbabwean women returned home more frequently, but even women with children remaining in Zimbabwe reported visiting only every two years. Importantly, in Cape Town there are few “grandmothers” from any of the migrant communities sampled for this study. This reinforced the notion that Cape Town was a transitory place of work, where elder, typically non-working women were simply absent.

Previous studies migrants, including Somalis in South Africa, have particularly emphasized unity, strong leadership, a sense of community and an ability to mobilize the community to advocate on specific issues (Jinnah, 2010; Lindley, 2009). However, what was striking in this study was that all three groups- Somalis, Congolese, and Zimbabwean women primarily described themselves as alone, though amongst Zimbabwean women, this theme was somewhat less pronounced. Zimbabweans were more likely to learn Xhosa, the primary language of black South Africans in Cape Town, more likely to return periodically, and more likely to reside near members of their extended family in Cape Town. Amongst Somali women, the sense that life

was “not free” (23-year-old Somali mother of 1, 11S) was repeated. Women’s descriptions of being alone, of other members from their country being very busy, also spoke to women’s resistance to being categorized as part of a cohesive community, at least in the specific context of bearing and raising children. Women acknowledged that yes, after birth some people would come over, but would constantly emphasize people’s busy-ness, and that this was not community or family. Nor, perhaps, did these female visitors necessarily advise women on feeding choices for their infants.

Advice, or “cognitive support,” was described in terms of the presence and physical support of family. While participants framed their experiences firstly in terms of loss of physical presence and physical support, this sense of loss was intertwined with how women framed their nutritional choices, particularly with regard to infant feeding. For example, this non-breastfeeding respondent describes her mother’s support in terms of both child-care and teaching her specific skills:

R: If my mom were here, it would be different situation. Because she would help me. To even prepare, to take the baby, to [show me how to] breastfeed, I think it would be a great difference if my mom was around.

I: *Did you get any advice from other Somali women?*

R: No.

23-year-old Somali mother of 1, 6S (interpreter present)

Somali communities across the Somali diaspora are renowned for coming together for weddings and funerals, for having a very well-developed system of monetary remittances, and for spending much of their time together. Indeed, Somalis predominately occupy one area of Cape Town (Bellville; Figure 3) and many live together in apartment buildings and converted factory spaces. However, rather than describing their community as tightly-knit and supportive, women tended to describe their countrywomen as “busy”. Elders were no longer present to share in the work of the household, and migrants had to take on housework, raising children, and financially supporting themselves and family back home, within the nuclear family unit- and usually without the benefit of financial capital. In some ways, Somalis were socially isolated yet did not describe benefit from being physically together; women tended to describe concern for their own close family.

The compounding of lack of social support with a lack of resources was apparent when I visited one Somali woman to conduct a one-on-one interview, only to find her 18-month-old baby left alone in the room- initially sleeping- because the mother had run out of food and had to go to the local store. Given that she was buying a few food items and that she was seven months pregnant with her second child, the respondent could not physically carry her older child and the groceries, and had no family or friend to leave the child with, so she left her alone. She presented the significant strain of having to be responsible for all the activities of the household. Her husband unsuccessfully attempted to find a new source of income after his spaza shop in a township had been destroyed, and lack of money was compounded by lack of support. Those who lived in other rooms of the run-down converted factory building were generally in situations of similar stress and scarcity, and thus offered very limited help.

For participants in this study, community was not some abstract camaraderie one automatically had with all nationals of one's country. Rather, a dominant sentiment expressed revolved around the pressure to survive financially, and to provide for family members back home. Participants felt they were very busy and not able to offer real support to one another. For example, women reported attending church but leaving right after the service was over. Somali women sometimes went to Mosque but were not obligated by religion to do so. They resisted questions that suggested they socialized at the mosque, as the expectation was that prayer was a religious exercise only. This complicates the proposition that interventions involving peer-educators, or linked to specific faith or community settings, present an effective way to improve infant nutrition (McCarter-Spaulling, 2008). In the context of the specific supports that migrant women hoped for post-partum, "community" seems to more accurately be defined as the network of family and friends that one had grown up with. It was the people one could call on to come for a week or two to help cook and clean. There was no question that one could call for a niece or friend back in Zimbabwe, Congo, or Somalia:

I: Are you living close to other people that you knew from back home? Do you have any Congolese family and friends around?

R: Not family, not friends, but ... people that I know from Congo.

I: Ok, ja. But they're busy?

R: They're busy. Life here is very hard. Everyone needs money for health, for school, for food. Here if you have got problems it is very difficult to assist each other. Everyone is busy.

40-year-old Congolese mother of 6, 13C

R: In Zim because you have a lot of relatives there, we speak the same language so it's different unlike here. Because in Zim it's more like when you have a neighbour you have to know where they are from, how many kids do they have unlike here I don't even know my neighbour's name, I don't know his name, I don't know who he or she is staying with, if it is a he or a she. It is quite different.

I: Yeah...How does that make you think about raising your children here?

R: Makes me feel hurt.

26-year-old Zimbabwean mother of 2, 14Z

R1: here in South Africa it's like just women, you do 'ah, this one, she's from my country', just give her a call, come and help me with this but there's no-one special that do that. Just for example we've got a woman, she just delivered here in the shelter, her baby is almost two weeks now. She came here, she was pregnant with the labour, so she just went to the hospital with one of the women and the driver, she came back, so everything she just doing her own, ja, there's no that someone to help her.

R2: ja, some women mentioned back home, I would even have someone visit in the morning and then they would stay the whole day, it is like that, they'd stay the whole day until the evening and help me the whole day and then they would go home, you

could send a niece ...

Congolese women's focus group, FG4CW

For Somali women there was some contradiction in how women thought of support in Cape Town: on the one hand they spoke of people coming and helping after the birth of the baby. They expressed a refrain of having help but not support. Something less easily articulable was missing:

I don't have anyone to help me. I have some Somali women who are my neighbour, and if I gave birth tomorrow, they would help me... clean the house, wash the clothes, so maybe I also visit the other neighbours, and the Somali ladies they will come and visit her. So we help each other.

26-year-old pregnant Somali mother of 5, 8S (Interpreter present)

It would be much different, in Somalia, because you've got your family, you feel, not thinking about... now I'm thinking of my really hard life, but in Somalia it's a very flexible life, I am caught up with the life here. I'm not free here, you know, because of the circumstance. It's a threatened life. But in Somalia I would be free, and my family with me, so if I want to go somewhere, someone could keep my baby, I could go.

23-year-old Somali mother of 1, 11S (Interpreter present)

The sense of isolation that families felt after birth was expressed in very strong terms, and elicited spirited discussion, agreement, and commiseration in focus groups. For example, there were stories of women becoming "mad" or returning home because of the isolation they felt:

R1:one of my friends, his wife she give birth, she was expecting when she give birth the people would come to visit her, to help her, but she didn't even get one and she had a lot of stress and she came like a mad... woman, they used to lock it, the house ...because she was throwing the stuff, she forget that she's with her baby, she didn't know that, but it was very tough time, like that, because it was almost three month, but the second one,

R2: She was getting more experience [laughter from group]

R1: ja! but now she have four kids now, ja, she have experience about that, now she can't get the stress again over that, you see.

Congolese men's focus group, FG3CM

But me you see I came here no-one help me so I was up and down with my baby. I must wash the clothes, I must clean the house I must...You see my body was like this [motions tiredness] I was tired even my bones was paining me when I go back to the hospital; they said no you are not sick. [...] What I can say about my friends here I can say they are wicked nhe? They are wicked!!

30-year-old Congolese mother of 2, 22C

Focus group participants were unified when they talked about the lack of connection within their respective communities, and the alienation they felt in South Africa. There was also an important sense of

loss over being unavailable, and not having resources to provide the support that was culturally appropriate and expected. For example, it was very difficult to visit those who did not live in an area with many migrants, because of the cost of transportation and the huge amount of time involved in taking multiple buses and minibus taxis on a Sunday, which already has reduced public transportation:

I know there's some people staying like Stellenbosch, like Greenpoint, Seapoint, where, so it's very hard for me to go visit someone in Stellenbosch because if I'm working Monday to Friday, so I will be off Friday or Saturday, Sunday and then that Saturday I may do something else but going like to Stellenbosch to visit someone and then coming back you see, it's very difficult.

Congolese men's focus group, FG3CM

Whereas in Congo one would never visit empty-handed, and with high unemployment many people were available to spend extended periods with new mothers, in South Africa resources are sometimes so scarce that people are faced with the choice to either not visit, or visit with nothing:

I don't have even money.... I should give the baby with something – I don't know, I just go. You see but in Congo it won't happen and it will never happen, even if people are jobless, but you'll see people they can go to the farm, get something there like apples or vegetables, they can bring.

Congolese men's focus group, FG3CM

Illustrated by the quote above, participants' sense of loss should also be set against the hypothesis that impoverished, homogenous networks may not be able to provide effective support (De Silva & Harpham, 2007). These descriptions of loss show the ways that bonding capital (Putnam, 2000)- in the form of close family members and friends- had been eroded by migration and by economic pressures in Cape Town. Given that *self-perception* of support, as much as actual experience of support, affects health and wellbeing (Wethington & Kessler, 1986), participants' descriptions of alienation and loneliness are significant in that they have implications for health.

Given the absence of physical support, the role of spouses (in this sample almost all women described themselves as married) was central. What had been a women's domain was now the domain of the immediate family. The next section will explore this theme.

Husbands and male partners

In this section, I argue that in a migrant context physical, emotional and informational support were all provided to some extent by migrant spouses. This did not diminish women's descriptions of themselves as "alone" even though all but two women were married, and all were married to men from their countries of origin. The cultural norm of all three countries clearly defined the work of the household as "women's work"; in Cape Town these roles were forced-at least at the surface- to shift. So while the recent literature has focused on the roles of elder women in shaping maternal and infant nutrition, in a migrant context, it may be that the role of husbands is an important player in migrant maternal and infant nutrition.

Men from all three migrant groups described themselves as solely responsible for caring for their pregnant

wives. While circumstances and some gender roles—what men and women actually *did* day-to-day—had changed for migrant men and women in their move to South Africa, men did not talk about migrant women as fully autonomous or capable. Men in all three focus groups described the financial and physical burden of having a wife or girlfriend who was pregnant. While previous studies have asserted that the pressures of migration, including isolation and legal status, give rise to higher rates of domestic violence (Menjívar & Salcido, 2002), there are no studies of domestic violence amongst cross-border migrants in South Africa. Men felt a duty to both their partner and their unborn child. Their descriptions highlighted the ways that couples felt alone, and the ways that life in Cape Town felt temporary and abnormal, rather than settled:

The other thing is that the wife or the baby, she become pregnant we get another job, it means you are working two times, when come from work you are working at home because of what they need of the woman. Our lady, they are not South African lady, our lady need only our food to protect a baby in the womb but I don't know, according to me, when my girlfriend she was pregnant, the first thing I see, it was a vomiting and the second thing it was her *need*, it was a big challenge. Come from home, when I get home she's starting to ask anything she want.

Congolese men's focus group, FG3CM

Navigating their wife's needs was often described as physically and financially burdensome; the cultural norm to provide extensive care to pregnant and post-partum women was likened to taking care of a child:

...You know, a pregnant woman, she's like a small child, a baby, that's what is a pregnant woman, that's the example that I can give to a pregnant woman. A child, if you've got a child, you are the one who choose the food for her, sometimes she don't want that food and you don't know what she want, so same applies to your woman.

Zimbabwean men's focus group, FG2ZM

...First child, you will be a totally blank, you don't know anything what to do, then she start giving you morning, come I'm hungry – at night, I'm hungry and mine, she used to like these cool drinks. You buy those 2l coke, like two in the fridge, when you get back from work around five, one is finished, by tomorrow morning another one is finished – 'hey, stop that!' and I like those ice block in the fridge, you chop those ice block in the fridge, eating them – but it's cold, you say how can you eat that it's cold, but that's what she wants...

Zimbabwean men's focus group, FG2ZM

The ways in which women described the role of their husbands in catering for their cravings during pregnancy (Chapter 4) affirmed their sense of dependence on their spouses. Immediately after birth, the absence of family members shifted roles to husbands and partners, who felt that they were responsible for more than they could handle- they were their partner's driver (when they could find a car to use), financial provider, sometimes the interpreter at hospital appointments, all while having to take an active role in raising their new baby. Many respondents discussed with sorrow the sense that the family unit had been reduced to a husband and wife team:

...it's quite a big deal when it comes to being a husband [...].it's quite scary ...your wife

is pregnant now, then from that moment on it becomes, it remains your responsibility, according to our culture, in terms of helping the wife.

Zimbabwean men's focus group, FG2ZM

...when they are pregnant they go, then they come after they give birth, maybe after three or four months... so they don't need to work when they [give birth], so they need someone who will do, who will bath the baby, who will look after the baby. What she must do, just to sleep and relax until the wound is healed. So if you are a man alone, it's difficult for us like we came from far and we came far, then to send someone back money to come and maybe you're staying in a one room and your aunty come, where are you going to stay with your aunty? It's kind of difficult like if you are in foreign countries, it's kind of difficult really, but if you are back home it's quite easy. I think the guys can agree with me.

Zimbabwean men's focus group, FG2ZM

Men were intimidated by the prospect of navigating pregnancy and birth alone:

I think women deserve support, I like the idea of support for women and families, it shouldn't be my job only, it would be better if society also supports and by society I mean churches, friends, families and okay, the society in general, they respect pregnant women, also offer support.

Congolese men's Focus Group, FG3CM

R1: That's why we see in our culture, when women are pregnant, if my wife she's pregnant, we take them back to their parents until she gives birth, she must stay there

R2: or you find someone, an elder person.

R3: an aunty to look after it, coz you see, to you, especially first child

R1: first child, you will be a totally blank, you don't know anything what to do

Zimbabwean men's focus group, FG2ZM

Yet their descriptions of themselves as "totally blank" or of having absolutely no knowledge about pregnancy was somewhat contradictory to the roles that men actually took on. In addition to having responsibilities to physically provide for spouses, Congolese and Somali men described the challenge of having to attend medical appointments because their spouse did not speak English:

R1: all the time and any time she needs help and taking her to hospital and all this stuff, assisting her because she didn't know English as well and she has to go, before she goes to hospital I have to write everything in a paper and when you go you have to say 'give them the paper, he will read the paper.' So when they do all the tests then I ask her also to ask the nurse to write in the paper so I can understand and explain to her at home

R2: Take somebody to help her!

R3: ja, I didn't, I don't have anyone here like to assist and take her to hospital and I had a tough time at work as well because sometimes I have to excuse myself from work and take her to hospital, even when the child was born, ja, those are kind of difficulties we

Thus for all migrant groups in this study, family support was now situated within the nuclear family. When women described the support of their spouse during pregnancy, they generally affirmed the supportive role of their spouse, while retaining traditional men and women's roles:

I: Does your husband shop for it [food] as well?

R: Yes my husband was very supportive especially when I was pregnant. When I was shopping he just take the car and drive with me around the shops and come back.

30-year-old Somali mother of 3, 7S

There was a limit to the change in roles. This husband helped to get his wife to the shops because he felt she should not carry a heavy load while pregnant, but he did not actually go with her into the shops; this was very much still a woman's domain, and certain roles were retained. In in-depth interviews and focus groups with women, it was apparent that expectations placed on spouses, from a women's perspective, were limited. They continued to consider themselves as "alone", and women expressed gratitude that their spouse very occasionally cooked dinner. Among in-depth interview participants, many spouses were working long hours as taxi drivers, spaza shop owners and security guards. For some women, their spouses would travel for business or live in an informal settlement during the week. While men presented themselves as their spouse's primary source of support, the extent of this support often had very well-defined boundaries, leaving women feeling even more alone.

Whereas the literature on maternal and infant nutrition focuses on the role of elder women in general, this role is circumscribed by their physical absence in Cape Town. Instead, husbands are the primary source of support for wives, though their support is limited. Husbands provide physical and financial support, and at times, emotional support. However, husbands could not necessarily provide informational support. Instead, nutritional decisions had to be pieced together in real time by a husband and wife team. In this light, it may be vital to consider spouses and family dynamics as decision-makers when designing nutrition interventions.

Past studies of Somali migrants in Johannesburg have emphasised the strong sense of "community" within the Somali diaspora, and the ways that the community rallies in support of community members-in need (Jinnah, 2010). Despite this, even a close-knit community such as the Somali were unable to provide the depth of support women described longing for during the maternal period- such as long visits or food preparation. As previously indicated, this is a consequence of the lopsided generational structure of migrant communities in Cape Town, given that different generations have different roles; the scarcity of elder women is an inherent characteristic of migrant communities in Cape Town.

Exceptions to the theme of loss

Some individuals revelled in a new sense of independence. While the roles of family members were sorely missed, there was also a subtheme of women expressing a positive sense of self-sufficiency and feeling more

secure in their own views, and somewhat freed by the absence of their families. For example,

R: I'll be doing everything nicely but she keeps on phoning "are you feeding the baby? She is doubting me. Because she is thinking I'm doing the same compared to the first child. I say 'no mommy now I'm grown up' it is now different.

[Laughter]

I: *And, and do you think that...It's better the way you raised him than that way with your mom?*

R: Ja! like it was my mom was doing everything for me. So now I'm proud of myself that I'm managing on my own without her. Though she keeps on phoning instructing me.

30-year-old Zimbabwean mother of 2, 15Z

I: *Did you have anyone with you?*

R: Ja, my husband was with me.

I: *Was there anyone else?*

R: No.

I: *And how was that?*

R: It meant a lot. For him to be in theatre with me it meant a lot. And it was very comforting ... you feel secure and... loved and, you know? Supported and caring.

I: *Ja. Did you imagine .. When you imagined having a baby did you imagine having family around after the birth? Or... how was it... just being you and your husband?*

R: Of course I would love my family in Kenya to be here. Of course I'd prefer to give birth back home... than here. But to me... I'm used to it being only my husband so to me... it was ok.

I: *Ja. Do you feel like you, your husband and son are...*

R: ...a complete family?! Yes!

30-year-old Somali mother of 1, 23S

Pressure, obligation and support were intertwined, and while men and women articulated loss, it was also clear that they were unable to provide the extensive supports they described receiving in their home countries. A previous study of Cameroonian migrants in Durban emphasized the extensive obligations of Cameroonian migrants to their kin network back in Cameroon (Fomunyam, 2012). This was in common with the descriptions of participants in this study, even though they were migrating from Zimbabwe, Congo, and Somalia. In light of the burden of being in South Africa to work, and the collective investment by family members in one's trip to South Africa, all extra resources- including time and money- would surely be quickly exhausted by endless requests from home. In this light, it was not only that one could not form the same network as back home. It is that the reciprocal and extensive set of physical, cognitive and emotional supports had real time costs, making it difficult for migrants to re-establish these links in a new country, particularly given the continued financial commitments to family at home. Each generation had specific

roles in providing various supports to migrant women and new babies, and a multigenerational society was central to the support new mothers received. That is, the working generation provided financial support while the elder generation and youth provided emotional, physical, and cognitive support. Thus even with strong ties between individuals from one country, the absence of multigenerational support left significant gaps in the kinds of support that could be practically provided within migrant networks.

Participants' sense of loneliness, when combined with financial pressure, incubated a simmering sense of crisis—for example in relation to tenuous legal status or unemployment—yet it is impossible to know from the study findings whether women would, given the support of elder women, eat 'well' or 'better' during pregnancy, breastfeed more, or introduce complementary foods appropriately. It is apparent that these decisions are deeply contextual and that they change over time. The medical community and elder women from Congo, Zimbabwe, and Somalia respectively do not necessarily perceive these three pillars of good maternal and infant nutrition in the same way. Rather, the absence of elders in migrant communities is important in the ways that it shapes how public health practitioners engage in conversations about good nutrition.

The role of “bridging” social capital and weak ties

The first part of this chapter highlighted how a longing for the presence of family was central to the ways in which women navigated Cape Town as a foreign, work-centred environment.

This section highlights the role of bridging social capital, and the ways that medical care and the health system more generally offers a potential source of these “weak ties”- particularly in the form of informational support – for migrant women. As described in the previous section, in the context of cross-border migration of families (rather than single men), despite a strong sense of national identity, migrants cannot provide extensive social support while raising children and working. A multigenerational community structure is necessary to provide such integrated support. In the absence of this, social services are vital. Cultivating ties- or bridging social capital- with health services in Cape Town is thus a key part of improving maternal and infant nutrition for migrants. To this end, the next section will discuss migrants' perceptions of their experiences with health care providers.

Health care providers and bridging social capital

Medical experiences of migrant mothers and infants in Cape Town

The health care system in Cape Town is a potential source of “weak” ties, or bridging social capital. For migrants such “weak” ties could potentially provide both informational support and links to other services. Whereas in women's countries of origin they could rely on a network of friends and family, women in Cape Town felt that they had few people who could provide answers to their health-related questions:

We don't have anyone close to ask you just have to go to the clinic to ask if you've got questions and stuff. So this side I think it's difficult...unlike in Zimbabwe.

30-year-old Zimbabwean mother of 2, 15Z

For example, women used the clinic growth chart as a way of gauging their baby's growth and health. For women pressured by peers to add foods in order to make their baby 'fat' (described in Chapter 5), this chart was a mechanism to affirm that their child was healthy and well-nourished:

If you take your child to the clinic every time- every time you have to go- when they weigh, there's a graph, it shows the growth of the baby. If the baby is not growing well, the graph will collapse. Or go the other way.

Zimbabwean women's focus group, FG8ZW

When women spoke positively of the medical care system, they seemed to be speaking of the medical competency of health professionals. They did not describe being afraid of dying in childbirth or of being denied lifesaving care, as was sometimes the case in their countries of origin:

But health wise and the clinics, and the equipments here in South Africa it's the best compared to Zimbabwe....honestly equipment and modernisation and the stuff here in South Africa it's best compared to the one in Zim.

30-year-old Zimbabwean mother of 2, 15Z

While describing "medical" care in South Africa in positive terms, migrants also described their relationships with health professionals as hampered by language barriers, xenophobia and cultural misunderstandings. Nurses are an important part of the health system, and participants primarily described xenophobic experiences with nurses rather than doctors. This may be because of the large power differential between migrants and doctors, or because migrants spent less time with doctors than with nurses. Even amongst English speaking Zimbabweans, nurses, who would talk to them in Xhosa, reinforced their outsider status and their adversarial relationship with both South Africans and government health facilities:

The other problem is, when we go to the clinics for the checkups, ne, some of the nurses they are Xhosa some are coloured, they are different, especially if we meet the Xhosa nurses, sometimes they can speak to them in their language, of which we don't understand their language. If you speak to them in English they can ignore you. Or, they can shout at you. It is bad for us. Of course, just because we don't understand their language.

Zimbabwean women's focus group, FG8ZW

Some migrant's perspectives on health professionals were related to sense of time- in the same way that participants felt that food in South Africa was rushed to grow (Chapter 4), participants felt that babies were "given a timetable" to be born. Somalis in particular felt that women were not given the opportunity to go into labour and deliver naturally. Rather, they were told a specific date their baby was to be born. This perspective related to the overall medical culture in South Africa, rather than to specific health care personnel:

R1: Somali women are given specific time to deliver their baby, unlike Somalia where they wait when she has to deliver soshe is told by her doctor or clinic, whatever, she's going to deliver the baby on 27th, today, or Freedom day, then she has to be there and the baby to be delivered, if not, if anything happen to her they will not accept her to

come another day, that clinic, ja or that hospital, if they deliver in hospital or clinic, so he say this is very problematic

R2: you know in terms of religion and our culture as Somali's, [...] it's not healthy or good ... to say this lady will deliver on that day because only God ...only God knows if she will deliver or not, so I think there is also a problem in terms of value and religion.

Somali men's Focus Group, FG1SM

Moreover, for Somalis, the sense of alienation from the medical system in South Africa was accentuated by the perceived frequency of caesarean sections.

You know here in South Africa and back in Somalia, they say there's a big difference and the difference is that in Somalia people deliver or give babies naturally, Somali women here in South Africa, they go through the C-section and he say that it something which is very challenging to other Somali women. Some of them they, when they go to C-section and the operation then they have to sometimes do family planning which is when they give them injection so that they cannot produce you know, or their system of producing children. He said that is very challenging, so he thinks that this is very problematic when it comes to South Africa and that in Somalia it was easier and better

Somali Men's Focus Group, FG1SM

This conflict related not only to the dominant orientation of the health care system, but also to the ways that Islam interacted with this health care system and to the ways that Somalis and medical personnel communicated. While it was very important that Somali women go into labour naturally, Somali participants did not feel that this was valued within the South African health system. Somali women described general and significant ill-treatment in interactions with South African services:

And then after three months of breastfeeding and [chest] tightness I went to the clinic and they told me to bring the birth certificate from home affairs, and they have to go back to home affairs, so you can imagine a baby whose throat is closed and they tell you to get the certificate... And when she's [the baby is] in danger! I went back to the clinic and at this stage she was feeling a little bit better...and you know, it's difficult. So it was difficult.

28-year-old Somali mother of 3, 10S

I: Did anyone take care of you?

R: No! Too much give medicine only!! [] some of the nurses are nicer than the other ones. Some of them they help you, they feed the child, they bath the child, but some of them they think that I have no illness, there's no explanation, I'm a show-off, I must just feed myself.

Somali women's focus group, FG9SW

Both Somali and Congolese women indicated that South African health professionals do not want women to have babies. Both Somali and Congolese women spoke of migrant women in Cape Town being sterilised without their consent and against their will. The ripple effect of these events and their retelling led to profound fears and antagonism between migrant communities and specific hospitals in Cape Town. As a

result, Somali and Congolese women were very concerned about what they perceived as forced or obligatory birth control, as well as its perceived effect on breast milk supply:

R: With another women they came to her when she was sick, and she had no husband there, and told her to sign... and she had no idea what she was signing. And they did the process [tubal ligation]... and she can't deliver anymore, even permanently. So when they go there, to the hospital, to complain, they said "you signed", and But she didn't understand, and she was sick. That's why I'm concerned. That's why I'm very concerned.

I: *Absolutely. Because you don't know what you're signing?*

R: Ja. She [the women in the story] even went to other doctors and other hospitals... to try to gain.. her system again, she said that even if she goes for operation, she cannot, and they gave up, you know...And they went back to Somalia.

26-year-old pregnant Somali mother of 5, 8S, Interpreter present

I get good advice and bad advice here (laughter) is another people, you know we come from French place, we didn't come from English place we come from a French place, now when you come here your English is too small, you don't know anything when you go to the hospital, the doctor, you're pregnant, you go to the hospital, [...] they just ask you, you want to cut, you want to make family planning, you want to cut your tubes and you don't know what they are talking, you just say yes, but if you have paper you sign, you go. After that you don't take anything, when you want to get a second baby, nothing is here because it's not doctor's [fault], it's your fault – it's not your fault, you didn't know this, but it's also doctor fault, how he can allow someone to cut the tube when is one child or two kids, even five or six [...] even people family planning, I mean leave someone to choose what you want, when you get the baby from the hospital, [they] just inject you, when you want to get the new baby, you can't get the baby easy because you're doing things, you see...so for me, that is not good

40-year-old Congolese mother of 6

In addition to the fear of sterilization, for Somali women, family planning is generally not allowed in Islam, and the implications of a small family are far-reaching and complex (e.g. as a source of shame, cause for divorce). While women expressed that Somalis in Cape Town did sometimes use family planning, the prevailing sense of violation by health care providers seemed to frame other interactions with health care professionals:

R: They explained to me about that injection. They said you are, you would not deliver for two years,. Not get the baby for two years,and I refused,

I: *Ok and they said ok?*

R: They explained to me and after I refused they were upset,and they said you cannot go you have to leave the baby. Or you have to be at the hospital.. If you are not taking the injection. They said that they will not take [let] you out if you do not take the injection.

I: *So did you end up taking the injection?*

R: No. I totally refused. And then they kept me there for two hours. And they called a lady, that supervisor, and that lady came, and she told me, and she listened to me and she

said you can go if you want. So that lady came, and said that if you are not ready, we cannot force you. So you can go. But the other lady, said that you cannot go you have to have the injection.

23-year-old Somali mother of 1, 6S

R: And she say if you deliver in the hospital, they do not let you to leave without the injection, that's what they say. You say no, [inaudible]

I: *Can you refuse?*

R: You know, you can refuse, but it will be a burden, it will be a fight.

I: *Do you think they make all women have that injection? When they leave the hospital?*

R: Yes.

26-year-old pregnant Somali mother of 5, 8S

You know allegedly the hospitals and doctor and health care system sometimes pressure the Somali women to do family planning but in our values, our religion, the family planning is something that only you need when there's a big crisis, when the doctor prove that it's [life threatening]

Somali men's focus group, FG1SM

Some of migrants' sense of coercion over family planning was embedded in the inability to communicate with healthcare professionals. At times this inability was seen as imposed by Xhosa-speaking nurses, as summed up in one Zimbabwean women's focus group:

Like what she's saying... If she's speaking in Xhosa, and she is giving me advice, how can I understand? When I don't speak Xhosa. How can I know how to raise that child, when I don't know!? Like, when it's a small child, 17, 20, it's your first child?! Like back home, there will be a big person, who will be teaching you how to bath the child, how to feed the child, how to put the nappy, how to put the umbilical cord, how to clean it. And all that stuff... But here... it's nurses who are going to teach you. Because there are no mothers, there are no aunties, there's nobody here. It's only you and you husband.

Zimbabwean women's focus group, FG8ZW

Zimbabwean women in particular related their immigration status to how they interacted with hospitals. Zimbabwean migrants often have tenuous legal status in South Africa. While some have been afforded temporary work visa status or asylum seeker status, these require frequent, unsuccessful trips to Home Affairs. These interactions with Home Affairs shape Zimbabwean migrants' ability to settle, seek work, and establish roots in Cape Town. Women in one focus group relayed their experience of hospital care workers and administrators acting as gatekeepers:

When they go to the hospital, they will ask you "where are your papers?" You are asking a person who is about to get delivery. She can't even communicate to say anything! Like some of them, they don't have papers because it is difficult! You can go to Home Affairs 5, 10

times. They can turn you back.

Zimbabwean Women's Focus Group, FG8ZW

Thus pressure to use specific methods of birth control and reservations over being asked to present proof of immigration status featured heavily in participants' experience of the health system. These concerns engendered significant distrust between migrants and healthcare providers and made it unlikely that migrants could internalise and operationalize nutritional messages. Moreover migrants' experiences with health care providers seemed to compound migrants' sense of exclusion in Cape Town. This sense of exclusion and isolation contributed to the sense that maternal nutrition and exclusive breastfeeding were of low priority as compared to pressing concerns of housing, employment, and legal status.

The role of language in providing medical care to migrants

While many migrants did not frame their poor experiences in terms of language, it was apparent that many negative experiences were, at their core, about the failure to effectively communicate health messages, including diagnoses. In South Africa, there is no system for free-to-patient medical interpretation; despite the constitutional right to health care (Article 27 (1) (a)), language is not yet a part of this right. This lack of medical interpretation affects South Africans as well as migrants, as many South Africans do not speak English, and few doctors communicate effectively in the first languages of their patients (Crawford, 1999). Using illustrations from the deaf community, and demonstrating the impact of interpretation on the lives and health of a few patients, Haricharan, Heap, Coomans, & London (2013) argued that we cannot talk of the right to healthcare without the right to language. There is currently substantive evidence in the few, mainly Cape Town-based, studies of language (Levin, 2006a; Levin, 2006b; Levin, 2006c) of the limitations of a health system that does not allow a large proportion of patients to communicate effectively with their health care providers. Thus the migrant case forms part of a broader need for medical interpretation in South Africa.

Issues of language were intertwined with issues of xenophobia and poverty. For example, among Zimbabweans, the language barrier was an unnecessary imposition: Nurses communicated in Xhosa, despite the fact that Zimbabweans could not understand the language. Moreover, it was Zimbabweans living in informal settlements- likely the poorest Zimbabweans- who raised this issue the most strongly. It is worthwhile to examine the implications of miscommunication on relationships between patient and provider. In particular, two Somali patients in apparently similar circumstances seemed to encapsulate the role of language in medical encounters. The first woman, Halima²⁴, was a 26-year old pregnant mother of five who described having suffered from high blood pressure and gestational diabetes during previous pregnancies. Halima's first husband had been murdered in the xenophobic attacks of 2008, and she could not speak English. Approximately six months pregnant, it did not seem that she had had antenatal care during the current pregnancy, fearing that she would be shouted at for becoming pregnant (a common occurrence described by Somali participants). During a previous pregnancy, she described being cautioned

.....
24 Not her real name

that if she returned pregnant, she would have a procedure to prevent her from becoming pregnant again:

R: I gave birth to some of my children at [hospital name], some at [hospital name], but the last time they told me, no this time, they gonna sew... something like tubes... I don't know

I: *Oh to stop you from having children?*

R: For five years.

I: *And can you refuse? Do you want that?*

R: I am thinking of maybe going to [alternative hospital], because ... [but] they might do that. Stop me for five years... and that's something I'm against. So I'm thinking of private hospitals, but I'm also thinking, it's too expensive!

26-year-old pregnant Somali mother of 5, 8S (Interpreter present)

Describing a deeply antagonistic relationship with health care providers and concerned for other Somali women who had reportedly undergone forced sterilisation, it seemed that Halima was at risk of health complications. She was alone with her children during the week as her husband worked running a small shop in an informal settlement. In previous pregnancies she was forced to go alone to medical appointments, despite being unable to speak English. Thus the social capital provided by friends and family was limited in helping her to navigate through the health system in Cape Town.

Rather than Halima communicating her priorities to providers, it seemed that she was shopping for a hospital that would not "know" her- she felt as though she had been blacklisted and was up for punishment for having children, rather than feeling that the health system had her best interests at heart. These fears were amplified by the stories of forced sterilizations that circulated within multiple migrant communities. While not minimizing her negative experiences, it seems possible that these experiences were compounded by the stress between the provider and patient given a profound language barrier. It was apparent that she and providers had to somehow communicate largely without language. From Halima's perspective, xenophobic health care providers did not want her to have children, and did not respect Somali's practice of Islam, which precludes family planning except in the case of serious illness. While she knew of her health conditions, she did not consider them serious or reason to consider family planning.

In relation to maternal and infant nutrition, it seemed that nutrition was of relatively low priority for health care providers attempting to provide care for pregnant migrant patients. Women's inability to communicate effectively with health care providers had implications for nutrition. Firstly, women were unlikely to ask questions about maternal or infant nutrition. Secondly, this sense of alienation and discrimination amplified women's sense of not being at home in Cape Town. In the context of maternal nutrition, the few times that nutrition was mentioned in the context of health encounters, the suggestions were too distant from women's realities to be taken seriously. In the context of breastfeeding, where adopting WHO recommendations on infant feeding would in many cases involve a significant act of faith and trust, the distance between migrants and providers has implications for health. The rules explained by nurses were at times misunderstood and it seemed the vast distance between health care providers and patients made advice seem non-applicable

to women's circumstances. Migrants tended to have a particularly antagonistic relationship with nurses, whom they spoke of as equals and as such, the advice of nurses was not described as either authoritative or helpful. Yet nurses were the primary source of healthcare advice.

When juxtaposed with the story of Fadumo, a second Somali participant, it seems that women in relatively similar circumstances, apparently similar beliefs, can have entirely different experiences of the health care system when they are able to communicate with health care professionals. Fadumo's experience reveals some of the ways that communication, bridging social capital, and experiences of xenophobia, might intersect. Fadumo was a 27-year-old mother of three (10S), who had also suffered pregnancy complications and who at the time of interview reported every three months to her local clinic to receive an injection to prevent pregnancy. Similar to Halima, she had been advised that, for medical reasons, she would need to avoid pregnancy for five years. However, in stark contrast to Halima, she perceived this recommendation as advice that was in her interests. At least part of this seemed to lie in her ability to understand what health care providers were communicating to her both in terms of language and the health literacy (that is, she was able to understand the medical reasons for the advice). Unlike Halima, she had lived in parts of Cape Town where there were very few other Somali families, forcing her to meet and form relationships with non-Somalis, and ultimately learn English from a Muslim-South African neighbour. While she had had what seemed to be fairly dramatic negative health experiences in the health care setting- an emergency C-section with additional complications- she did not interpret these in terms of xenophobia. Rather, her tone suggested that while she was lonely and homesick in South Africa, she had cast health care providers as desiring and working towards her best interests. It was not clear to what extent these experiences impacted on her nutrition or the nutritional choices for her children; nevertheless, lines of communication were open between her and health care providers, and nutritional messages could be conveyed in a setting of trust.

For Halima and Fadumo, language and the role of bridging capital were apparent, with possibly dramatic health implications. In Ascology's (2001) study of refugee women's pregnancy experiences in the Netherlands, she argued that "communication is a key ingredient in the development of the social and support networks that are so crucial in helping refugee women adapt to their new surroundings and navigate their way through the health care system." (p.387). However, many migrants in Cape Town have limited opportunities to learn English, and the lack of medical interpretation in the South African health care system presented seemingly insurmountable barriers to effective care for migrants, even in areas like maternal and infant nutrition.

The frequently problematic relationship between health care professionals and migrant women may seem tangential to the research question of how infants are fed, but there are ways in which this relationship is integral. While most women express openness to using some form of birth control, their sense of coercion and their fear over denial of care translated to an overall lack of trust in the healthcare system. In turn, this limited their ability and willingness to seek out advice of healthcare professionals, and situated them in a position that would make them more likely to distrust whatever advice they did receive.

Conclusion

In this chapter I discussed social capital in the context of migrant experiences in Cape Town. While studies relating grandmothers to maternal and infant nutrition in non-western settings have made valuable contributions to our understanding of the broader context in which nutritional decisions are made, the findings of this study provided insights that differed in important ways.

Specifically, in the absence of the elder generation of women, participants spoke at length about the physical and emotional support given by non-working family back home. They spoke much less about nutritional decisions. Therefore, while previous literature revealed grandmothers' authority and decision-making power, this study cast light on the ways that authority was actually nested in other kinds of post-partum support (such as cleaning or cooking), and ultimately in the broader relationships within the extended family at home or in the host country. In the South African context, spouses and the newly nuclear family described navigating these choices alone, according to specific current circumstances, such as a baby crying or refusing to breastfeed.

From a public health perspective, understanding the ways that nutrition is embedded in the newly nuclear family may be important to designing and implementing effective interventions. Given the absence of extended, nonworking family members, there were limitations to the kinds of bonding social capital that seemed to exist in Cape Town. The extent to which migrants could tap into the existing social capital of health systems was hindered by both xenophobia and language; language is integral to health care encounters. In the next chapter, I discuss the implications of the three empirical results chapters and make recommendations for further study.

Chapter 7: Discussion and recommendations

Introduction

In this chapter I summarise the key factors influencing migrant maternal and infant nutrition and suggest ways these findings could inform public health policy and interventions, as well as advocacy. I frame these factors as three primary challenges to good nutrition that I uncovered while undertaking this research. These are, (1) the influences that drive the consumption of low-nutrient foods during pregnancy, (2) the influences driving low rates of exclusive breastfeeding and the early introduction of complementary foods in migrant communities in this study, and (3) findings related to role of social support, migrants' generally poor experiences in the health care setting in relation to both maternal, and infant nutrition. Thereafter, I provide recommendations for each of these three primary findings. I consider the overarching socio-political factors impacting migrant lives in Cape Town, including xenophobia, and argue that the previous recommendations should encompass attention to these factors. Lastly, I consider the study limitations together with avenues for further research.

1. Factors influencing low quality diets amongst migrant mothers

Rather than speak specifically of food during pregnancy, women spoke more generally about the food environment in Cape Town. This resonates with previous research that posited that women generally do not significantly change their diet during pregnancy (Abu-Saad 2008). As such, this discussion and the recommendations in the subsequent section will consider the overall food environment as a means of improving maternal and infant nutrition, as well as the importance of public health interventions to preserve food traditions.

This study revealed that participants were concerned about changes in their diets. Dietary challenges was amplified by the consumption of clay amongst Zimbabwean and Congolese migrants and scepticism towards iron-folic acid supplementation amongst all three migrant groups. While participants did not talk about their experiences of food scarcity, it seemed likely that some migrants consumed low-quality diets *and* were also food insecure, given hesitation answering questions about food expenses.

Migrants' descriptions of consuming energy-dense nutrient-poor foods complements previous research on food consumption in relation to socioeconomic status. Based on studies of overall nutrition, an individuals' low socioeconomic status is linked to the consumption energy-dense, nutrient-poor diets, particularly in HIC, which in turn is associated with poorer health (Darmon, 2008). Globally, the obesity epidemic disproportionately affects the poor, even in LMIC (Popkin and Gordon-Larsen 2004). For migrants in this study, who usually formed part of the urban poor in Cape Town, socioeconomic status played a central role in migrants' preference for energy-dense, nutrient-poor foods. During pregnancy, the health implications of low

quality diets included obesity, which is linked to increased risk of pregnancy complications (Leddy, Power & Schulkin, 2008). Low quality diets also result in micronutrient deficiencies, which can affect the health of both mothers and infants in the short- and long-term (Black, 2008). In the long term, low quality nutrition is surely one way that the poor- in this case migrants in Cape Town- shoulder a disproportional burden of chronic disease (Strong et al., 2005, Yach, Hawkes, Gould, & Hofman, 2004).

In this study, food traditions offered a potential buffer against the nutrition transition towards energy-dense, nutrient-poor diets. Participants from all three countries of origin spoke about craving “traditional” foods, and the foods of home, as well as the context in which these foods were consumed. These foods included fresh fruits and vegetables, as well as dried greens, dried fish, groundnuts, and fresh meat. This was juxtaposed with a dislike of many of the foods available in Cape Town, which were often described as “unnatural”. Moreover, cravings for “traditional foods” usually did not include sweet foods. While certain food traditions- such as the Mediterranean diet- have at times been elevated in the nutrition literature as especially healthy, there is evidence that almost any food tradition is healthier than the typical Western industrial diet (Willett et al., 1995). This may be because food traditions typically involve preparing foods from basic, from-scratch ingredients, which are generally more nutritious and less obesogenic than processed foods (Monteiro, Levy, Claro, de Castro & Cannon, 2011). Perspectives on “traditional” diets often do not include consideration of how experiences of food scarcity intersect with tradition, and become part of a tradition’s evolution. In the case of the migrant population, these relatively recent experience of food scarcity impacted how migrants navigated food choices in Cape Town. For example, for Congolese and Zimbabwean migrants in this study, meat was previously highly prized but described as largely unavailable. This intersected with an environment where meat was perceived as cheap and available, and vegetables as of poor quality and unavailable, which seemed to result in a progressively more meat-centred diet. The quality of a particular diet depends on the availability of foods in relation to season, affordability, and accessibility.

Given crowded living conditions and pressing financial concerns, migrants usually did not have the time or kitchen space to prepare traditional foods or consume food in the context that they remembered meals at home. Moreover, the absence of elder women, who might typically take on much of the cooking in an extended family household, hindered participants’ adherence to “traditional” diets. While they ate at least some traditional foods during pregnancy because of their symbolic value and the comfort they offered, most migrants did not have the money to access and consistently consume imported traditional foods, despite the availability of these in Cape Town. Therefore, while many migrants were critical of South African foods and memorialised the foods of home, knowledge alone was insufficient for building a nutritious diet in Cape Town. These findings revealed some of the complexity of rejecting and embracing foods in cases where migration is coupled with poor urban settings. The nutrition experiences described by cross-border migrants may overlap with the experiences of internal migrants coming from rural parts of Cape Town.

Popkin has asserted that the nutrition transition in the developing world is occurring much faster, and at a much earlier stage, than in LMIC’s economic development (Popkin 2002c). Similar to many migrants globally, many migrants in this study came from environments where the nutrition transition had not yet

occurred, and thus experienced the nutrition transition even more rapidly. Perhaps because of migrant populations' more recent history of food shortage, as well as the historical focus on acute rather than long-term illness, participants conveyed an overall trust in their body during pregnancy, guided by cravings. In this light, the conflict between health and desire that is prevalent in Western discourses around diet (James, 2004) seemed almost entirely absent amongst the study population. On the one hand, this seemed to have the positive side effect of confidence and lack of guilt, particularly during pregnancy. On the other, it seemed to incline migrants towards consuming energy-dense, nutrient poor foods.

2. The influence of “work” on low rates of exclusive breastfeeding

Consistent with other studies of breastfeeding in Africa, women participants in this study began to breastfeed, but very few breastfed exclusively, as per WHO recommendations. While some Zimbabwean and Congolese mothers in the study did continue to breastfeed for 12-18 months, participants largely assumed that extended²⁵ or exclusive breastfeeding were impractical given their context in Cape Town. Participants were generally less aware of the long-term benefits of breastfeeding on the health of their baby. Their focus on the short-term health of their child is not surprising given the focus in most low-income countries on acute health needs. Moreover, most participants did not perceive any negative consequences in relation to the addition of complementary foods and water very soon after birth.

Participants had generally heard that breastfeeding is preferable to formula feeding, yet did not necessarily feel that this was true in their specific circumstances. Unlike women in studies based in HIC, migrant women in this study did not express regret, guilt or shame over their feeding choices, or over choosing not to breastfeed in the manner recommended by South African nurses (Taylor & Wallace, 2012; Labbok, 2008). While the public health messaging in favour of breastfeeding is generally focused on health benefits to the infant, migrant women in this study introduced formula and other complementary food in the context of their own needs.

Moreover, far from being “free”, as sometimes presented in breastfeeding promotion, there were clearly significant hidden costs involved in breastfeeding, and particularly in exclusively breastfeeding (Rippeyoung & Noonan, 2012). Participants weighed the benefits of formula feeding in relation to their need to do errands, their experiences of stress and feeling that their milk was inadequate, modesty in public, as well as their self-perception as financial providers. Far from these perceptions being peripheral to infant health, a mother's mental health and experience of stress influences the wellbeing of her child (Weinstock, 2005). As such, these breastfeeding “costs” must be considered and addressed in breastfeeding promotion efforts.

Moreover, women's reported access to maternal and infant healthcare, together with relatively low infant mortality in Cape Town, suggests that stunting and obesity, rather than survival, may be a more pressing concern for this population. Given that breastfeeding interventions have a big effect on survival but a small effect on stunting (Bhutta et al., 2008), the benefits of breastfeeding depend on underlying context. For

25 Beyond 12 months

migrants in Cape Town, it is likely that increasing rates of exclusive breastfeeding would have a limited effect on survival, given low rates of mortality. However, while breastfeeding is less likely to be a matter of life and death in Cape Town, it remains central to developmental potential, and thus to social and health equality. As such, broadening the breastfeeding and complementary feeding discourse to include discussion of developmental potential may be an essential first step on promoting breastfeeding amongst migrants.

3. Social support as a factor in maternal and infant nutrition

Social support has been highlighted as playing an important role in maternal and infant nutrition, particularly in non-western settings (Aubel, 2012; Bezner Kerr et al., 2008). New mothers are sometimes presented in the literature as lacking in agency relative to elder women in some non-Western settings (Aubel, 2012). However, in this study, women presented themselves as *having* agency back home as well as in Cape Town. For example, women described themselves as “modern” and making their own feeding decisions. At home, grandmothers and “helper” women-cousins, aunts, and friends, provided emotional and practical support in cleaning, washing and cooking. Participants did not describe themselves as under the authority of elder women; rather authority was conveyed via physical (e.g. cooking and cleaning) and social supports (e.g. presence and conversation). While recognizing that migrants may romanticize the roles of family back home, it was striking that family were usually not presented as overbearing, but as comforting, redolent of home. Nevertheless, norms—including both cooking traditions and patterns of baby feeding—were undoubtedly conveyed by the elder generation through their constant physical presence, and could no longer be conveyed given their physical absence. As such, migrants from all three migrant communities presented the absence of elder women and extended family members in Cape Town as a profound loss.

There was evidence to suggest that the roles of men had shifted in the context of migration to Cape Town. Boyd and Grieco (2003) proposed that gender be explicitly considered in the context of migration, and this study affirms the notion that migration catalyses a change in family roles, in part due to the changes in extended family structure. These changes in roles may involve shifts in power (Boyd & Grieco, 2003), which was to an extent was the case in this population. However, as men were more likely to hold formal employment and speak English, they appeared to retain a position of power in this participant sample. Rather, it was the day-to-day running of the household that had ceased to be purely within the female sphere. Moreover, in a study of migration in Johannesburg, domestic violence was found to be prevalent in migrant communities, and was described in the context of xenophobia, crime and lack of support (Kiwauka, 2008). That is, while the lack of extended family presented some opportunity for greater gender equality, these evolving gender roles were not explicated in depth in this thesis. This study suggested that the intersection of migration with masculinity and health (Gough & Robertson, 2009) may be of interest in the South African context.

Studies of bonding capital, including levels of trust and levels of identification and membership, have noted that different kinds of social capital are needed for different life events (Heaney & Israel, 2008, p.196). This study affirmed this observation. The kinds of support that migrants named as helpful in the maternal period involved an all-encompassing support after birth that even the most close-knit ethnic community in Cape Town was ill equipped to provide. Rather community members could provide, at most,

brief visits. Many migrants were principally concerned with the health and wellbeing of family members in their countries of origin, leaving little margin for newer friends and more distant family members in Cape Town. For mothers forming a new breastfeeding relationship with their infant, this absence seemed to influence women towards the use of formula.

Recommendations

These recommendations build on the discussion of key findings, described above, in responding to the challenges of low-quality diets, low rates of exclusive breastfeeding, and lack of social support for migrants. They include recommendations for further research, interventions at the level of health systems or specific health facilities, and broader policy interventions, including municipal, provincial, or national-level food legislation.

Policy-level interventions to improve diet quality

Participants' concerns over food quality included concerns over consumption of fast foods and meat. These concerns seemed to mirror broader trends in the nutrition transition of lower income countries (Popkin, 1998). Moreover, large international fast food corporations such as *KFC* market themselves extremely effectively to the urban poor, which presents a considerable health challenge to public health in urban settings. Local fast food restaurants such as *Chicken Licken*, *Hungry Lion*, and *Frydays* are similarly popular. Participants presented these as foods of celebration, as they were particularly favoured during the celebratory and "special" time of pregnancy. Ubiquitous small corner stores in migrant neighbourhoods stock chips, biscuits, sweetened drinks, and sweets, and occasionally maize meal, rather than fresh foods. As such, potential interventions must respond to the underlying factors that make fast foods, highly processed foods, and foods with high fat and sugar context desirable, affordable and accessible.

Given migrants' perception that they cannot eat healthily in Cape Town, what is the role of public health policy in improving migrant nutrition, and what avenues are appropriate for exerting this role? Drawing on evidence from systematic reviews and best-practice reports, Bryce asserts the importance of producing national agendas for nutrition, as well as the importance of including maternal and infant nutrition on that agenda (2008). The challenges related to energy-dense, nutrient-poor foods is not limited to migrants, yet there are very notable gaps between the issues raised in the national nutrition programme, primarily related to undernutrition, and the challenges apparent in the migrant population: of possible overnutrition, or calorically adequate but micronutrient-poor diets. In the roadmap for nutrition in South Africa for 2013-2017, only one of the 16 evidence-based interventions focused on overnutrition (DoH, 2013). This intervention is described as "nutrition education and information on healthy eating and health risks associated with poor diets". However, for migrants in this study, such an educational intervention is unlikely to be effective, as it does not consider the broader context in which food is consumed, and assumes that migrants are in a position to make choices about healthy eating, which did not seem to be the case in this study.

Given that participants in this study seemed to experience the nutrition transition as inescapable, a critical examination of the food environment, as well as the use of legislation to control specific foods is one

avenue through which to improve the overall food environment in South Africa (Monteiro et al., 2011). There is global precedent for considering policy-level legislation, including at the level of municipalities such as Cape Town. Bans on advertising of products that are perceived as unhealthy is one historical approach in HIC, however, tobacco advertising bans were found to have little effect on tobacco consumption (Saffer & Chaloupka, 2000). Food labelling was not always successful, as it relied on consumer awareness, as well as consumers' literacy and numeracy skills (Downs, Thow & Leeder, 2013). Bans or control of specific foods or ingredients, while controversial, may be a potential response to improving the overall food environment (Tan, 2009; Okie, 2007).

New York City offers an example of the potential role of public health in legislating against foods and food-products that are perceived as dangerous to health at the municipal level. In 2007, New York City introduced a much talked about ban on trans-fat in restaurant food (Tan, 2009; Okie, 2007). In Tan's evaluation of this intervention, he proposes a framework for considering similar interventions, including "(1) background research, (2) stakeholder support, (3) effective policy implementation and (4) evaluation and dissemination." In this way, policy level interventions remain grounded in local realities. A recent systematic review of trans-fat legislation found that bans were effective in reducing dietary intake of trans-fat (Downs et al., 2013). Thus there is precedent, an evidence base, and programmatic recommendations for considering legislation to improve the food environment.

Such across-the-board bans of specific foods are controversial and there is continued debate over balancing the public health mandate with personal freedoms, not unlike debates that took place over tobacco legislation across the world (Gostin, 2007b; Gostin, 2007c). Resnik (2010) has argued that the banning of foods should only be a last resort, when there is extremely strong evidence of its ill-effects. Food legislation tends to be particularly fraught because of the complexity of the human diet and the plethora of unknown factors that make a particular food harmful or healthful. Moreover, such an approach will inevitably face challenges, given that trade agreements specify the terms in which multinational corporations may market themselves in South Africa (Hughes & Lawrence, 2005; Evans, Sinclair, Fusimalohi & Liava, 2002). In considering specific food bans, the slippery slope argument looms large; if trans-fat today, what will prevent government legislation encroaching on human freedom (Resnik, 2010)? Paternalism is one of three grounds for public health intervention, which Gostin (2007a) outlines as the government mandate to act (1) to prevent harm or risk to others, (2) for the best interests of incompetent people (3) to prevent harm to self, or paternalism. For migrants in South Africa, as well as other South African residents, such paternalistic legislation is consistent with the findings of this study, which seemed to indicate a lack of choice, or the inability to prevent harm to self, given the prevailing food environment.

Indeed, Olivier De Schutter, outgoing UN Special Rapporteur on the Right to Food, argues that he, and many others, have come to the conclusion that junk foods and sugary drinks are as harmful as tobacco and deserve to be treated as such (Bittman, 2014). Gostin argues that while certain harms are seemingly self-imposed, they may be deeply socially embedded and harmful to public health (Gostin, 2007a). Indeed, when migrants in Cape Town described their "choices," they described the absence of real choice.

Moreover, migrants' experience of the nutrition transition in Cape Town is likely to resemble the experience

of urbanites in many HIC and LMIC. While accentuated by migration, the nutrition transition also affects non-migrants, and particularly the urban poor. Given successes in regulating specific processed foods in HIC, legislation at the level of municipalities, or at the provincial or national level, may play an important role in mitigating the effects of the nutrition transition in LMIC. While legislating to control specific foods is certainly not the only approach to improve food supply in Cape Town and other urban centres, it is an approach that recognizes the ways that nutrition is *not* a matter of choice for the urban poor, as education interventions tend to assume.

Preserving and cultivating food traditions

In addition to considering ways to *reduce* access to unhealthy foods, it is important to consider ways to *improve* access to nutritious foods. In this study, adherence to traditional diets seemed to generally provide nutritious additions to participants' diets. Previous studies of food traditions in low-income households in Western countries have focused on improving cooking skills as a means to improve health (Stead et al., 2004; McLaughlin, Tarasuk & Krieger, 2003). While it was not apparent that migrant women lacked cooking skills or general skills in food preparation, other barriers prevented women from preparing meals. These barriers included lack of time, kitchen space, and lack of access to traditional foods or nutritious foods, in general. These factors all prevented migrants from retaining food traditions, and from cooking from scratch.

In schools around Cape Town, vegetable gardens are taking root as one response to issues of both food security and food quality. These efforts are very promising, and may include both cross-border migrants as well as internal migrants. The only challenge with these efforts is that they may only occur later in a child's life, after the key 1000 day nutritional window has closed. As such, the conversion of public urban spaces into food-producing land, including the conversion of the Company Gardens in the centre of Cape Town, represents an exciting development, and one that hopefully might ultimately benefit migrants.

While the challenges of lack of time and kitchen space are difficult to address, it is valuable to consider the role of public health research in highlighting how the availability and affordability of healthy foods may be improved. Advocating for improved access to nutritious foods for migrant populations in Cape Town may involve including migrants in existing efforts to improve food security and food quality. Battersby (2013) highlights the complexity of the challenges related to cultivating food traditions and enhancing urban access to foods in Cape Town, including not only urban agriculture and the absence of large supermarkets, but the broader contexts in which food decisions are made. These contexts include the role of work, shortage of savings and very small amounts of cash for food, as well as the challenges related to transportation (Battersby, 2013). Given these overlapping issues, common to both migrants and non-migrants, migrants should therefore form a small part of the broader research and intervention around food supply in Cape Town.

Designing nutrition education of migrant women and couples

Given that both fathers and mothers were involved in making nutritional choices for their infants in Cape Town, both should be included in nutrition interventions (Susin & Giugliani, 2008). Beyond including men and women in nutrition education, such interventions could include written materials in migrant

languages, making use of breastfeeding promotion videos that have been created in North America and Europe, and workshops. These kinds of educational interventions have been successful in other settings (Khoury, Mitra, Hinton, Carothers & Sheil, 2002; Hannula, 2008), but the rates of success vary widely.

In-person support has the potential to be even more successful. An existing project focuses on providing these kinds of supports to South African mothers in Cape Town: A Cape Town-based NGO, *Philani*, provides support to South African women in Khayelitsha to improve maternal and infant nutrition (Philani, 2014). In particular, they have identified the importance of mentoring in improving mothering skills. Given the absence of migrant elders and participants' overall lack of connection to South Africans, connecting migrants to such mentors, through NGOs like *Philani*, may greatly improve infant nutrition. Sharing the findings of this study with organisations may provide a rationale for migrants' inclusion in programming, and for partnership between maternal and infant health-focused NGOs, and migrant-focused NGOs.

Given both men and women's baseline positive perceptions of formula and the early introduction of solids, it is important for interventions of all kinds- paper, video, or one-on-one mentorship- to consider ways of improving migrants understanding of the long-term benefits of exclusive breastfeeding and recommended introduction of solids. Women commonly did not appear to factor in the financial and time costs of preparing formula, nor did women perceive the introduction of formula or complementary foods in terms of its effect on breast milk supply. However, interventions that describe breastfeeding as "free" fail to adequately consider the opportunity costs of breastfeeding (Rippeyoung & Noonan, 2012). For migrant women, these opportunity costs were important factors in the introduction of formula, and interventions to improve rates of breastfeeding must consider these hidden costs.

Education—even when broadly defined and undertaken by peers—has limitations, especially for a very mobile population like migrants. That is, education does not undertake to solve the overarching factors that make breastfeeding difficult. These overarching, but perhaps more costly, interventions might involve efforts to make breastfeeding in public more socially acceptable, or promoting a public health rationale for improving the safety of neighbourhoods so that women feel comfortable going out with their infant, rather than staying indoors. For women who find Cape Town weather extremely cold, interventions might consider weather-appropriate dress with mothers—particularly in the context of winter, where women often kept their children indoors for long periods, and felt excessively homebound if they were to exclusively breastfeed. These broader interventions apply not only to migrant women, but also to other non-migrant families in Cape Town. Considering the overarching factors influencing maternal and infant nutrition will be considered in more depth in a subsequent section.

A focus on the long-term benefits of breastfeeding

Moreover, given that migrants' primary concern was not for their child's survival, it is valuable to promote research and intervention- a parallel discourse- that is focused on individuals' overall developmental potential. While it is valuable to prioritise child survival in South Africa, especially given the health systems crisis caused by the HIV epidemic, improving survival is necessary but insufficient to address inequalities that are rooted in early development, including in maternal and infant nutrition. That is, a child in a poor

neighbourhood in Cape Town has lower developmental potential than a child in a wealthy neighbourhood, and at least part of this potential is rooted in worse early nutrition, including the early introduction of complementary foods and formula. Therefore, such a parallel discourse involves designing and implementing interventions that focus on the long-term benefits of breastfeeding or delaying the introduction of solids. For women who are not breastfeeding in Cape Town- both migrants and non-migrants- such a broader focus may offer more compelling reasons to breastfeed than the widespread focus on infant survival.

Further research on the relationship between social capital and health in LMIC

Previous studies have suggested that informal, rather than formal social support is more effective in supporting certain health behaviours (Heaney & Israel, 2008). Tentative evidence described in Chapter 6 suggested that even one or two supportive friendships with South Africans could transform the ways women navigated the health system and the ways that they felt about South Africa. Friendships facilitated the learning of language as well as the transfer of goods and informational support. At times, when multi-ethnic, churches and mosques seem to have a role in providing this support. Further research is needed to identify ways that informal, bridging, social capital may operate in a South African context for migrants. Improved understanding of social capital has the potential to inform interventions relating health systems, faith based organizations, and NGOs.

Facilitating communication between health care providers and migrants

Medical providers are well poised—due to the regularity of antenatal and postnatal appointments—to notice and consider interventions to support migrant families. In some cases, health care settings and home affairs were the two primary places when migrants interacted with South Africans. Rather than excluding, shouting at, or admonishing migrants to have fewer children, health care providers should be empowered to provide social support to migrants. For example, hospitals with high numbers of migrant patients could meet once or twice a year with key migrant serving NGOs, in order to open channels of communication and facilitate sharing on best practice. Such a supportive role is intertwined with South Africa’s history of xenophobia, as well as with South African health systems strengthening. It cannot be successful without a common language or a medical interpreter, discussed in a subsequent section. Where migrants are seen as “other”, “foreign”, and unknown, it is difficult to imagine effective social support from medical care providers. Improved communication with medical providers- via trained medical interpreters- is an essential first step in bridging the capacities of health system with the capacities of the NGO sector.

Facilitating communication in clinics and hospitals allows for the provision of medical support and advice to migrants. Women migrants in this sample were not accessing English language learning opportunities, and they did not have enough social interaction outside of their ethnic community to learn English. Thus professional medical interpretation is necessary for both migrants and non-English speaking South Africans. While there is a documented need for interpretation (Levin, 2006a; Levin, 2006b; Levin, 2006c), there is to date no free-to-patient interpretation services for medical encounters that take place with non-English speaking patients. The need for medical interpretations applies to cross-border migrants as well as non-English speaking South Africans. The mismatch between the strongly worded human rights

orientation of the South African constitution and the lack of capacity at a health systems level speaks to a core challenge of the South African health system in living up to the standards of the constitution. However, given that human rights motivation for medical interpretation is largely established (Haricharan et al., 2013), the question becomes one of practical application and financing for this. While medical interpretation is potentially costly, it could reduce rates of potentially devastating and costly medical errors, as well as procedures currently performed without informed consent (Ku & Flores, 2005).

In the United States, where there is an established history of medical interpretation, the main practical barrier to interpreter services has long involved the lack of a billing code-- who pays? Secondly, in small refugee populations with few migrants from a particular country, where does an interpreter come from and who determines whether or not they are adequately competent? Despite these complications, most large hospitals in the U.S. include interpreter services, and have rules for facilitating quality medical interpreting (Jacobs et al., 2001). Importantly, informal interpreters such as family members may not interpret in the healthcare setting. In a South African context, establishing strong procedures, funding, and billing is clearly a significant task.

As a practical first step in tackling this task in South Africa, the role of public health researchers, and practitioners within the public health system, in advocating for free-to-patient medical interpretation may need to establish two things: that it changes health outcomes, which to an extent has already been established (Haricharan et al., 2013), and that it is practical at a health systems level. As such, piloting medical interpretation with a specific migrant group where a clear need has been demonstrated, at one or two hospitals, could pave the way for interpretation for other migrant groups, as well as South Africans.

The role of public health research in combatting xenophobia

One primary goal of this dissertation was to extend public health understanding of migration as a social determinant of health. Xenophobia looms large in the lives of migrants, particularly in medical settings, and thus is surely a human rights issue that requires a public health response. Public health professionals must therefore seek to understand xenophobia as a social determinant of health. To date, while health inequalities between migrants and host populations have been documented in public health literature, these are seldom framed in terms of experiences or perceptions of xenophobia. Explicitly naming xenophobia as a determinant of health allows it to “galvanize inquiry and action” (Krieger, 2003). The need to highlight xenophobia as a determinant of health resonates with the public health obligation to identify and work against the upstream causes of disease and death: structural inequalities including poverty, poor housing, working conditions, etc.

In her important article asking, “does racism harm health?” Krieger (2003) discusses the role of naming a connection between racism and health, and then setting out to determine and test the pathways through which racism operates. These are not only the pathways of socioeconomic deprivation and discrimination, but also the ways that these experiences are perceived and internalised; “...the point of explicitly naming and scientifically investigating racism as a determinant of population health is to generate valid knowledge to guide actions designed to improve public health” (Krieger, 2003, p.197). In South Africa, such a public health

focus on the relationships between xenophobia and health could help to reveal the ways that structural inequalities insidiously affect the health of migrants via xenophobia. Where the public health agenda is ultimately an agenda to promote health equality across populations, the study of xenophobia needs to be an explicit part of the research agenda in migration research (Edwards & Davison, 2008).

At a practical level, given pervasive xenophobia and the wide range of issues facing migrants in Cape Town, public health researchers and practitioners have a role to play in describing and framing these challenges for a broader audience. To this end, in Cape Town, a Refugee Health Forum meets sporadically. However, the agenda typically excludes research. Somali women in Cape Town also meet to discuss their health issues and advocate collectively. In Johannesburg, a large and well-organized migrant health forum documents cases of xenophobia and denial of care in the health system, and collectively advocates on behalf of migrants. This group serves as an excellent model as it includes lawyers, doctors, public health researchers, NGO workers, and migrant leaders in discussion of how best to improve the health of migrants. Such collective action is vital to efforts to disseminate information, combat xenophobia, and promote migrant health. Study limitations, silences and future research directions

Maternal and infant nutrition represent just one small part of migrants' health, and of maternal and infant health, respectively. Nutrition in the context of pregnancy and the first two years of a child's life is also a small, albeit crucial, part of a broader nutritional context. Recognizing the limited scope of the study, this section considers the extent to which the study findings speak to broader issues of migrant health.

Given the limitations of the current literature around maternal and infant nutrition in a migrant context, this study was qualitative and exploratory. It was foundational in that it revealed where migrants were living in Cape Town, the kinds of housing migrants are living in, and how this related to migrants' experiences of maternal and infant nutrition. It also allowed for tentative suggestions for intervention and future research. Future study might also involve design, implementation, and evaluation of these recommended nutrition interventions in Cape Town, or in other migrant communities in urban centres in LMIC.

As a small qualitative study, this study provided an in-depth view of several migrant households, but the quality of current data related to migrants in Cape Town remains poor. It was not possible to find disaggregated existing data for country of birth and language—two primary proxies for migrant status. This data needs to be collected or extrapolated from existing data in the Western Cape, as these numbers have an important role to play in shaping service delivery, as well as in counteracting the myth that migrants are flooding the city, which has not borne out in studies based in other South African cities (Landau, 2005). Moreover, socio-economic status and health outcomes are worthy of broad analysis. Rather than necessarily comparing migrants and non-migrants' health outcomes, as has received extensive attention in HIC, the purpose of collecting better data on migrants in Cape Town and other LMIC contexts would be to show the problems that both migrants and non-migrants face. In this light, improving the health and developmental potential of migrants is complementary to parallel efforts to improve the health and developmental potential of non-migrants. In LMIC, where social services may be overstretched, such a complementary approach may be more effective than advocating for the re-routing of resources towards migrants.

The qualitative nature of the study, as well as its epistemological roots in social constructivism, is both a

key limitation and a key strength. The study cannot attest to the nature of migrants' overall diets, nor even the diets of the three migrant groups sampled. Rather, it speaks to the key concerns, as well as the meanings and understandings ascribed to foods, which provides a way of conceptualising trends and directing future research. Future research, including validated diet instruments that measure the quantity and quality of food consumed by migrant groups in South Africa, would greatly contribute to existing knowledge of nutrition in the context of South-South migration.

This study identified participants primarily through word-of-mouth and migrant community organizations. Via this sampling method, participants were likely to be more connected to migrant community based organizations and NGOs, than others. However, when discussing the possibility of lack of food, for example, it is possible that few of the most vulnerable- or least connected to NGO resources- were interviewed in this study. I attempted to overcome this challenge by recruiting via multiple community organizations and a women's shelter. However, this challenge was not fully resolved. Moreover, while other lines of questioning in the study were generally uncontroversial and welcomed by participants, issues of food scarcity were problematic, and participants did not necessarily answer questions around food costs and scarcity frankly. Future study should recognize this challenge, and investigate food scarcity amongst migrants in Cape Town. Brief, cross-sectional questionnaires that reach a large number of migrants may reduce issues of stigma if conducted anonymously, and help to generate a picture of the overall prevalence of food scarcity in migrant populations. Alternatively, ethnography that involves long-term presence with migrant families may uncover patterns of food scarcity and reveal the way that families navigate this scarcity.

This study focused on three migrant groups. This scope was carefully considered in reference to the goal of the study to explicate the relationships between maternal and infant health and migration, rather than culture or nationality. Moreover, heterogeneity exists within migrant groups, as well as between them. However, the study ran the risk of representing migrants as overly homogenous. Where there *was* commonality, historical similarities existed between migrants of different national backgrounds, it was sometimes difficult to differentiate between the role of migration and the roles of common non-western norms and values. As a public health study, my representation depended on the relevance of similarity and difference *to maternal and infant nutrition* in Cape Town. Thus it did not speak to all aspects of migrant health, or to all aspects of migration. Rather, it spoke to broader aspects of migration *in reference to* their relationship to maternal and infant nutrition.

As such, although not the focus of the study, it was apparent from the small samples of Congolese, Zimbabwean, and Somali participants that certain issues were more pronounced than others. For example, Somali and Congolese women raised issues of family planning in relation to breastfeeding more strongly than did Zimbabwean participants. Similarly, Zimbabwean and Congolese participants expressed longing for the foods of home more strongly than Somali participants. These expressions of concern and longing were broadly linked to migration, but they were also country-specific. Future research could investigate the nuanced differences to identify if these have an impact on long-term nutrition and health.

Many of the experiences described by cross-border migrants in relation to food and nutrition during pregnancy might also apply to internal migrants, particularly internal migrants from rural areas of South

Africa. The ways in which the experiences of cross-border migrants might overlap with those of internal rural-urban migrants is worthy of further study.

Cape Town is a unique city- it is more wealthy and has better government services than many African, or even South African, cities. This also translates to more opportunities for employment. Moreover, race can play a major role in one's lived experience in Cape Town, with much of the city's wealth concentrated in predominantly white suburbs. Migrants in Cape Town may have more money to buy fast food and junk food than other urban migrants across Africa. This trend may make migrants in Cape Town more susceptible to obesity than those in other African cities. However, Cape Town also has large informal settlements- or slums, and health and social services for the majority of the population are by no means comparable to HIC. Given these contrasts, migrants' nutrition in Cape Town may include aspects of both HIC and LMIC.

This study was not comparative, and so I could not definitively draw parallels between context in Cape Town and other African cities. Nevertheless, for migrants who lived in inner-city or slum-like conditions, it is likely that many issues related to maternal and infant nutrition may be similar, particularly in the overarching context of South-South migration. The stresses of life in the inner city, particularly in light of tenuous immigration status, seemed to be one that resonated with narratives and research of migrants across Africa. I connected these stresses to the silences around long-term health, which seemed central to breastfeeding decision-making, which requires a long view of health.

The juxtaposition of having a legally protected right to access health care, but a mixed ability to actually access, understand, and get the most of health care, is likely to resonate with other large cities across Africa, and perhaps other cities globally. However, this access is likely to be better in Cape Town than in many other parts of Africa. The challenges faced in providing good care to migrants in Cape Town may be helpful in informing practice in other South African cities, and presents a strong case for advocating for free-to-patient medical interpretation. The study also highlighted the role of xenophobia and discrimination in Cape Town hospitals. This is likely to be in common with other South African cities, which share a common history of apartheid. The extent of xenophobia may or may not be shared with other African cities, which have colonial histories and scarce resources in common with Cape Town, yet also have different immigration policy and unique postcolonial histories, healthcare systems, and economic contexts.

I did not explicitly consider the length of time a migrant had lived in South Africa. In the case of this study, most individuals had been in South Africa for less than ten years. However, given that many of the migrants who arrived relatively recently have remained in South Africa, it is likely that there will soon be a larger cohort of migrants who have lived in Cape Town for over ten years. Understanding the ways in which maternal and infant nutrition, as well as social support, evolve over time may offer additional insights into the relationships between migration and health. Moreover, it is not known whether diet changes gradually, or relatively suddenly, in the context of migration to Cape Town. Further, longitudinal research could provide additional insights into this relationship in a South African context.

Conclusion

In this chapter I reflected upon the empirical chapters (4-6) and considered the challenges to maternal

and infant nutrition given the context of migration to Cape Town. Maternal and infant nutrition was often subsumed by significant livelihoods challenges related to housing, xenophobia, employment and legal status. Of these challenges, some (e.g. employment, housing) were to some extent shared with non-migrants, whereas others (e.g. xenophobia, legal status) were unique to migrants. The broader socio-economic challenges to breastfeeding and healthy eating intersected with an urban food environment that drove the consumption of energy-dense nutrient-poor foods, particularly during pregnancy. The absence of an elder generation translated to the absence of a significant source of household labour, which also impacted both breastfeeding and nutrition more broadly.

Responding to the challenges of migrant maternal and infant nutrition involves highlighting the broader problems of poor housing and lack of legal status. Understanding and responding to challenges involves public health intervention, government-level intervention and research. Such interventions may at times be migrant specific, with the goal of improving migrant health in both Cape Town and other cities. They might also involve including migrants in the broader public health agenda of improving health equity for both migrants and non-migrants. The next chapter will summarize the study's contribution to public health knowledge, and conclude the dissertation.

Chapter 8: Conclusion

This study explored migration as a social determinant of health in relation to maternal and infant nutrition in Cape Town, South Africa. While health has been studied fairly extensively in relation to South-North migration, it is relatively under-investigated in the context of South-South migration. The interactions between maternal and infant nutrition and family structure, as well as the roles of work and new food environment, all offered new insights into the relationships between migration and health in the Cape Town context. The findings of this study resonate with other LMIC settings, where similar patterns of migration and similar socioeconomic contexts may exist.

As in other studies of pregnant women (Abu-Saad & Fraser; 2010), nutrition during pregnancy was rooted in overall diet. Migrants' description of their diets revealed their experiences of the nutrition transition in Cape Town. These experiences may be similar in other urban centres in LMIC. While women's cravings were for traditional foods, women commonly described eating fast foods and junk foods. That is, it seemed that maternal diets included small amounts of expensive and healthy traditional foods against a backdrop of fast foods, junk foods, 'pap' and meat. Migrants' diets generally seemed to be both energy-dense and nutrient-poor, putting them at risk for chronic disease. Set against the context of the nutrition transition, this trend is framed by socio-economic status, where the urban poor in general consume less nutritious foods. Moreover, previous literature shows that a mother's low-quality diet may negatively influence the developmental potential and health of subsequent generations (Lussana et. al, 2008; Roseboom et al., 2001). As such, it becomes a mechanism through which socioeconomic inequalities are perpetuated. This study explored migration, the changing global food supply, work and changing family structure as intersecting themes influencing the diets of migrants, in particular pregnant mothers.

In common with breastfeeding patterns in Africa more generally, migrant women were likely to initiate breastfeeding, but unlikely to exclusively breastfeed their infants as per WHO recommendations. Whereas in their countries of origin women are likely to add complementary foods at an early age, in Cape Town women were likely to supplement with formula from an early age, as well as to add complementary foods to their infants' diets. Migrants also felt that they breastfed less, both in frequency and duration, than women in their countries of origins. In addition to reflecting breastfeeding norms in Zimbabwe, DRC, and Somalia, and perceived norms in South Africa, these patterns of infant feeding reflected women's perceptions of South Africa as a place of work, where exclusive or extended breastfeeding was perceived as impractical. Given that work outside the home is a key theme in much of the breastfeeding literature globally, the important finding from this study was that work within the home was often also presented as a barrier to exclusive breastfeeding.

This notion of Cape Town as a place of work, rather than as a home, reflected the losses that were inherent in the act of migration to South Africa. While migrants were generally resident in Cape Town indefinitely, they did not feel at home. These losses were all the more poignant given their relative universality amongst all three migrant groups. In some ways maternal and infant nutrition represented tangible expressions of migrants' loss of "home", in the form of relatively lower rates of breastfeeding and shorter breastfeeding

duration relative to home, or in the relatively lower priority given to food preparation. There seemed to be specific underlying reasons that Cape Town could never come to represent home. These reasons impacted on maternal and infant nutrition somewhat indirectly but were nevertheless profound, and up to now these relationships remained relatively unstudied in a migrant context. That is, migrants could not conceive of Cape Town as home because of 1) poor housing and socioeconomic status, 2) lack of legal status, and xenophobia 3) the absence of the elder generation and extended family.

Firstly, poor housing and socioeconomic status represented both tangible and intangible barriers to good maternal and infant nutrition. Most migrants experienced very crowded living situations and shared amenities. As such, where home was a single room, and kitchen space and ablutions shared with relative strangers, food preparation was undermined and, more broadly, migrants' sense of home could not easily be re-established in Cape Town. The relationships between notions of home, food preparation, and breastfeeding were central to understanding the nutrition of cross-border migrant women and infants in Cape Town.

Secondly, the narratives of migrant women reflected the ways that lack of legal status and experiences of xenophobia reverberated in many parts of cross-border migrants lives, including on their health. That is, experiences of xenophobia coloured migrants' perceptions of South Africa, as well as South African government services. It also had implications for employment and housing. Migrants reported direct experience of xenophobic violence and paid premiums on secure housing to avoid vulnerability to xenophobic violence. Moreover, they perceived discrimination in the health sector and were faced with extreme vulnerability to exploitation and deportation because of lack of legal status, and lack of means to obtain legal status. Experiences of xenophobia impacted migrants' perceptions of social support and social trust, which in turn is very likely to impact health (Wethington & Kessler, 1986). The stressors of poor housing and discrimination are known to have negative consequences for health, and represent one of the ways that socioeconomic status influences both morbidity and mortality (Pearlin et al., 2005). Given the factors underlying maternal and infant nutrition, evidence from this study suggests that improving the long-term health of migrants in South Africa must include advocating for reasonable means to acquire legal status in South Africa, as well as for improved living and working conditions. This, no doubt, is a key issue for other migrant populations around the world.

This study also revealed the need for further study into the economic and social impact of migrants within the South African healthcare system, and provided new evidence of the need for professional medical interpretation within the South African healthcare system. While healthy migration is South Africa's best interest, such a goal is impossible without means for communication, informed consent, as well as sharing of health information. Lack of communication had profound impacts for migrant health, and even more broadly, for migrants' perception of the South African health system.

Thirdly, the absence of the elder generation translated to a lack of a multigenerational support system, making migrants less resilient to changes in employment or the costs associated with caring for new children. In relation to maternal and infant nutrition, participants described the traditional role of elders and extended family in preparing food, not only during pregnancy. Elder women also traditionally provided extensive physical help after the birth of a new baby, thereby allowing mothers to rest and establish a

breastfeeding relationship. As with the first and second factors underlying migrant maternal and infant nutrition, the absence of the elder generation had both direct and indirect implications for nutrition; their absence represented both a symbolic loss to migrants' sense of home, as well as a tangible loss to carrying out the daily activities of a much reduced household. The absence of migrant elders has not previously been studied in relation to maternal and infant nutrition. It may be an issue of importance in many migrant settings, particularly in other LMIC or for seasonal labour migration, if migrants move with their children.

The aforementioned losses and the associated challenges to maternal and infant nutrition were significant. Despite this, it is important to acknowledge the ways that the nutritional concerns of migrants in this study may also represent a departure from, and arguably an improvement on, the historically dominant maternal and infant health discourse in LMIC; that is, a discourse focused on survival, and on child survival specifically. This study serves as evidence for the growing need to broaden this discourse to include long-term health outcomes. Such efforts are particularly timely as the UN moves from the Millennium Development Goals, towards the Sustainable Development Goals, which include particular focus on equality and long-term resilience (UN Department of Economic and Social Affairs, 2014) In the case of maternal nutrition, the evidence presented in this study indicated that research and intervention should pay attention to the quality- rather than simply the caloric sufficiency- of maternal diets, as well as the implications of the nutrition transition on chronic disease rates in LMIC. In the case of infant nutrition, a strong case can be made for the value of the WHO infant feeding recommendations in promoting long-term developmental potential. Such a shift must involve explicit acknowledgement of the tenuous circumstances of migrants, as well as the overarching contexts that threaten healthy food traditions, and make breastfeeding difficult.

The factors directly and indirectly influencing maternal and infant nutrition together revealed the complexity of health-related behaviours in a migrant context. In Cape Town, migrants' individual preferences and socio-cultural norms interacted with their food environment, socioeconomic status, legal status, and family structure. Together, these shaped what pregnant women and infants were likely to consume. This study therefore illustrated the centrality of the circumstances of migration- who migrates, when and from where- in shaping health and health behaviours, as well as the circumstances of the new context. Unpacking these contexts is critical to designing and implementing effective public health interventions for migrants.

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Appendices

Appendix 1: Research questions

How do women understand and make decisions regarding their nutrition during pregnancy and the post-partum period?

How do women talk about/discuss the nutrition of pregnant women, including themselves, in home countries?

How do women talk about/discuss the nutrition of pregnant women, including themselves, in South Africa?

How women navigate between these two sets of norms for themselves?

Are there specific beliefs and behaviours highlighted by women with good outcomes?

How do women understand and make decisions on how best to feed their newborn and infant?

How do women talk about/discuss the nutrition of newborns and infants in their home countries?

How do women talk about/discuss the nutrition of migrant newborns and infants in South Africa?

How do women navigate between these two sets of norms for their families?

Are there specific beliefs and behaviours highlighted by women as beneficial to their infant's health and wellbeing?

What are the kinds of emotional and physical supports and sources of information (health assets) that help women make nutritional choices?

How do women describe household support in their home countries?

How do women describe household support in Cape Town?

How has the role of mothers and mother in laws changed?

Have changes in migrant support structure changed women's behaviours related to nutrition during pregnancy and of their infant?

Are there specific resources highlighted by women as particularly useful?

Appendix 2: Interview guides

In-depth Interviews

Respondent Number: _____

Country of Origin: _____

Potential Prompts

Research Question 1: How do women understand and make decisions regarding their nutrition during pregnancy and the post-partum period?

General maternal health and self-care

Can you talk a bit more about your last/current pregnancy?

Is this your first pregnancy?

How was/is your health during your pregnancy?

On the day that you heard you were pregnant, how did you feel about the pregnancy?

After you knew you were pregnant, was there anything you did differently to take care of yourself?

What made you do that?

General Nutrition

Can you describe some common meals that you eat every day?

Who shops for food in your household? Who decides what to buy? Where do you shop?

Maternal Nutrition

When you were pregnant, did you eat these foods?

Were there any special foods that you only eat when you're pregnant?

On what basis/Why?

Migration context

Can you talk a bit about your previous pregnancy in [your home country]?

Do women back home eat particular foods while they're pregnant?

Were there any foods you would have liked to eat but couldn't in South Africa? Why?

How do you feel about how you took care of yourself while you were pregnant?

Did you take a vitamin when you're pregnant? How did you decide whether to take the vitamin or not?

Research Question 2: How do women understand and make decisions on how best to feed their newborn and infant?

General Infant Nutrition

Can you talk about what you feed your baby?

How has that been for you- do you feel like you've fed your baby the way you wanted to?

Can you talk about breastfeeding/formula feeding a bit more?

How do you feel about breastfeeding/formula?

How do you decide when to start feeding your baby solid food?

What kinds of solid foods do you feed your baby?

Infant nutrition in the context of migration

Was this experience different from feeding ----- in [your home country]?

Would you have done things differently at home?

Nutrition and health

How has your baby's health been?

Can you tell me about taking care of your baby on an average weekday?

Can you talk a little more about why you think your baby's health has been [good/bad/other]?

Introductory questions on informational supports (social capital)

Did you talk to anyone about breastfeeding?

For how long did/do you want to breastfeed your baby? Why?

When your baby is sick with diarrhoea or a fever, what do you do?

Research question 3 What are the kinds of emotional and physical supports and sources of information (health assets) that help women make good nutritional choices?

General

Do you feel like you've had support during this pregnancy and after the birth of your baby?
What kind of support has been most helpful?
Who helped you decide how to feed your baby?

Informational support

You mentioned ... about your mother/mother-in-law. What advice did/does she give you about feeding yourself/your baby?
How did you feel about getting advice while you were pregnant and after your baby was born?

Physical supports

Does anyone help with chores/feeding/taking care of other children?
Are there older women in Cape Town to talk to about taking care of your baby?
What kind of advice do they give you?
How do you feel about that advice?
During pregnancy/now that you have a small child, what do/did you miss about home?

Focus group guide

Question Prompts

4. I'm interested in talking a bit about your ideas of pregnancy and infancy in your community- both back home and here.
5. Tell me a bit about your ideas about pregnancy and infancy in your community.
6. Can you talk about how people think about women's health during pregnancy? (if food doesn't come up, prompt: can you discuss what foods pregnant women eat and why?)
7. Can you talk about how people feed their babies in your community?
8. Do you think things have changed here in South Africa?
9. Who in the community supports pregnant women and new mothers?

Individual sociodemographic data, to be gathered privately after the end of the focus group.

Group number

Participant number

1. How old are you?
Age/Year

How long have you lived in South Africa? _____

What area do you live in? _____

Highest level of education

Marital Status

- Married, living with spouse
- Married, separated
- Divorced
- Never married
- Other

Appendix 3: Information sheet for all participants

MIGRANT MATERNAL AND INFANT HEALTH IN CAPE TOWN

This study is interested in how women from different countries care for themselves during pregnancy, and for themselves and their babies during the first year of the baby's life. This topic is very important to the health and well-being of women and their babies, and understanding the topic better may allow health professionals to serve women and babies from your community better.

The research will include ninety-minute interviews with about thirty women. These will take the form of conversations, where I am interested in learning as much as I can about women's experiences of feeding themselves and their babies.

It will also include nine group interviews, or focus groups. Each group interview will be a discussion between all the people there, where the men or women talk to each other about how women take care of themselves and their babies.

In some cases, an interpreter will be available to interpret during the interview. If you do not feel comfortable in English, I will have requested an interpreter be present during our interview. The interpreter will maintain confidentiality, and will not share what you talk about with anyone else.

This study should not involve any harm or discomfort to you. However, talking about pregnancy and the health of your baby may bring up painful memories. If this is the case, you can stop the interview at any time. If it brings up painful memories that you need to discuss with a professional, I will give you the phone number of professionals who are trained to help you deal with these emotions and memories.

The interview will take place at a community organisation, in a church or mosque, or in your home. You may decide the location that works best for you. I will check with you to make sure that the space that we're talking in is comfortable and private enough for you. We need to be in a space that is private enough for us to talk freely.

I will record the interviews without including your name in these recordings. After I have finished the study, I will delete these recordings from my password-protected hard drive. My goal is to finish the study completely by the end of 2015.

The study does not entitle you to specific benefits, but there will be some refreshments available during the interviews. The study will also pay R50 for your transportation and the costs associated with the time you spent in the interview.

If you have any questions or want further information about the study, please contact:

Doctoral Candidate:

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School of Public Health and Family Medicine

University of Cape Town

Anzio Rd., Observatory 7925 South Africa

T:079 559 8868; email hunterjo@gmail.com.

Ethics committee contact: Ms. Lamees Emjedi Tel: 021 406 6338

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University of Cape Town, Anzio Rd., Observatory 7925 South Africa

T:

Email:

Ethics committee contact: Ms. Lamees Emjedi Tel: 021 406 6338

Appendix 4: Directions for focus group participants

[TO BE READ AFTER OBTAINING INDIVIDUAL INFORMED CONSENT]

Thank you so much for agreeing to help us with this study. My name is Jo Hunter Adams. I am a student from the University of Cape Town. I am involved in a project to learn about migrant maternal and baby feeding in South Africa.

Please respect the confidentiality of other participants by not talking about the answers after the meeting. We are interested in hearing your perspective, and your name will not be included in any reports.

I would like you to talk to each other rather than me. I will begin the conversation with a question, but after that I will leave you to talk and only speak if we have gone off topic, or to ask a follow-up question or clarification. It is ok to disagree with what others have said. The more information we hear, the better we can understand the topic of feeding for pregnant women and their infants. There are no right or wrong answers.

I will let you know when we are near the end of our time. Would you like to ask any questions about the research?

Appendix 5: Consent Forms

Consent form for in-depth interview participants

Read to participant:

I would like to ask your permission to interview you about your experiences of pregnancy and feeding your baby in South Africa.

This interview is confidential. I will give your answers a number, and only I will know which number you received. Your participation is voluntary and you may stop the interview at any time. After I interview everyone, I will write about what I was told, without mentioning anyone by name.

This is not a test and there are no right and wrong answers. If you do not understand a question, please ask me to repeat it or explain it. The interview should take about one and a half hours. I would like to tape record the interview if you comfortable with this. The recording will only have your number, not your name. May I record the interview? **Yes..... No.....**

May I interview you? **Yes..... No..... (If yes, please sign below.)**

Name of participant (print) Signature Date

Interviewer's name (print) Signature Date

Witness's name (print) Signature Date

Consent form for focus group participants

Read to participant:

I would like to ask your permission to interview you about your experiences of pregnancy and feeding your baby in South Africa.

Please respect the confidentiality of other participants by not talking about the answers after the meeting. We are interested in hearing your perspective, and your name will not be included in any reports. I will give your answers a number, and only I will know which number you received. Your participation is voluntary and you may stop the interview at any time. After I interview everyone, I will write about what I was told, without mentioning anyone by name.

This is not a test and there are no right and wrong answers. If you do not understand a question, please ask me to repeat it or explain it. The interview should take about one and a half hours. I would like to tape record the interview if you comfortable with this. The recording will only have your number, not your name. May I record the interview? **Yes..... No.....**

May I interview you? **Yes..... No..... (If yes, please sign below.)**

Name of participant (print)

Signature Date

Interviewer's name (print)

Signature Date

Witness's name (print)

Signature Date

Appendix 6: Codes and Code Definitions

Name of code

Abbreviation in *HyperResearch*

Definition

O. Demographics

Dem

Demographics—Age, years in SA, Education, Marital Status

0. Introductions

Intro

Introduction to participant or focus group discussion.

1. Celebration of pregnant woman and celebration of baby.

Cel_Wom_Bab

This includes catering for cravings, wanting to take special care of a woman, wanting to take special care of oneself. It also includes the celebration that would take place in country of origin when baby is born (including going to maternal mother's house)

2. Sense of Loss

Sens_Loss

Sense of loss, including issues with home affairs, feelings of loneliness, feelings of how things might have been back home, etc.

3. Nutrition during pregnancy

Nut_Preg

Anything that involves nutrition during pregnancy, including cravings, traditional food, etc. Also includes more general references to health during pregnancy, and taking care of oneself.

3.1 Traditional Foods

Trad_Food

Includes all references to foods that woman frames as "traditional". May also fall under "sense of loss" so may be double coded.

3.2 Multivitamins

Vt

Any reference to taking or not taking multivitamins for pregnancy, also including any reference to vitamins in general, whether correctly used or not.

3.3 Real Food

Real_Fd

Any reference to missing food from home. Overlaps with sense of loss (may be a subcode) Includes all references to chicken, good fruit from home, etc.

3.4 Fast Food/sweets

KFC

Any reference to cravings for KFC or fast food or sweets, or to giving oneself specific license/permission to eat junk during pregnancy.

4. Breastfeeding

BF

Anything that involves descriptions of breastfeeding or not breastfeeding, in the abstract or in the case of the participant.

4.1 Formula

Form

Anything involving introduction of formula, beliefs about formula.

5.0 Medical Advice

Med_Adv

Medical advice during pregnancy and after birth, including how to care for oneself during pregnancy, what to eat, how to breastfeed, and how to feed one's baby.

5.1 Medical Experiences

Med_Exp

This includes experiences of giving birth, experiences of family planning, or second hand references to family planning, etc. It also includes visits to clinic to check baby weight, etc. It does not include medical advice, including how to feed a baby, how to care for oneself during pregnancy, etc.

5.1.1 Birth Experiences

Birth_Exp

All descriptions of birth experiences. Does not include antenatal visits or postnatal visits.

6.0 Complementary Feeding before four months of age.

CF_Pre4

Anything that involves complementary feeding of infant before four months of age

6.1 Complementary Feeding after four months of age

CF_Post4

Anything that involves complementary feeding of infant after 4 months of age.

7. Money

Mon

Anything that involves concerns of money/finances, perceived of other people's concerns over finances or other's wealth.

8. Work

Wrk

Speed of life/and work in country of origin and in new country

9. God

Gd

Any mention of God, faith, or resignation or perceptions around one's fate. Overlap with sense of loss.

10. Perceptions of health of mother and baby

Perc_Health_Baby

Perceptions of health of mother and baby, including perceptions that highlight how a mom viewed the baby during pregnancy.

11. General Pregnancy

Preg_Gen

Pregnancy General applies to any descriptions or parts of pregnancy that are not included in nutrition or other medical experiences

12. Social support and advice

Soc_Supp_Ad

Includes all social support and advice during pregnancy and the early part of a baby's life.

13. Other

Oth

Other—anything that doesn't fit with other codes