



ULLA ASHORN

Child Health-seeking in Lungwena, Malawi



ACADEMIC DISSERTATION

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TIIVISTELMÄ (SUMMARY IN FINNISH)

Aikaisempien tutkimusten perusteella tiedetään, että malawilaisten lasten terveystilanne on huono: tämä pienen itä-afrikkalaisen maan 5-vuotiskuoolleisuus on korkeimpia maailmassa eli 215 tuhatta elävänä syntynyttä lasta kohden. Lasten yleisimmät kuolinsyyt ovat kehitykselle tyypilliset malaria, aliravitsemus, anemia, hengitystieinfektiot, tuhkarokko ja ripuli. Syitä siihen, miksi nämä lapsilla tavalliset sairaudet usein johtavat kuolemaan, ei tiedetä. Yleisellä tasolla köyhyys kuitenkin toimii selittävänä tekijänä. Tässä tutkimuksessa tarkastelen malawilaisten lasten terveydentilaa hoitoonhakeutumisen näkökulmasta. Tutkimus kuuluu terveys sosiologian alaan.

Työhön kuuluvassa kirjallisuuskatsauksessa on aineistona lasten hoitoonhakeutumista kehitysmaissa käsittelevää kirjallisuutta (n = 120). Olen arvioinut sekä aikaisemmassa kirjallisuudessa esitettyjä empiirisiä havaintoja että metodologisia asetelmia. Tutkimuksissa raportoidaan hyvin vaihtelevia hoitoonhakeutumiskäytäntöjä pääasiassa Afrikan maista. Merkittävin metodologinen huomio on, että tutkimuksissa on pidetty tärkeimpänä kysymyksenä arvioida äitien sairauksia koskevaa tietoa ja verrata sitä biolääketieteelliseen tietoon. Kirjallisuudessa on hyvin vähän muunlaisia tutkimusasetelmia. Esimerkiksi hoitojen saatavuutta on tutkittu yllättävän vähän.

Tutkimukseni perustuu Malawin eteläisessä osassa, Lungwenan alueella, maaseutuolosuhteissa kotoille haastatteluaineistoille. Keräsin tietoa aiheesta käyttäen avainhenkilöiden haastatteluja, teemoitettuja ryhmähaastatteluja ja äitien lomakehaastatteluja (n = 203). Tutkimuksen metodologisessa osuudessa olen käynyt läpi eri tapoja käyttää haastatteluaineistoja. Koska oma tutkimukseni on retrospektiivinen, luen keräämiäni haastatteluaineistoja niin, että ihmisten lausunnot kertovat pääosin sairastuneiden lasten hoitoa koskevista tiedoista, asenteista ja preferensseistä, eivät niinkään todellisesta käyttäytymisestä. Demografiset tiedot sekä perherakennetta, perheen taloutta ja koulutusta koskeva data on kuitenkin kerätty sellaisilla survey-lomakkeen kysymyksillä, jotka viittasivat asioiden tosiasialliseen tilaan. Kenttätöaineistoon perustuen raportoin kahdenlaisia tuloksia: kuvailevia ja analyttisiä.

Kuvailevassa osuudessa esitän äitien käsityksen siitä, mitä ovat tyypillisimmät lasten sairaudet, niiden aiheuttajat, ehkäisy ja hoito. Tämän osuuden keskeisiä havaintoja on, että äidit pitävät eri hoitovaihtoehtoja resursseina, vastakkainasettelua modernin lääketieteen ja paikallisten parannusmuotojen välillä esiintyy harvoin. Tyypillistä on pikemminkin äitien itsensä ilmaisema lasten sairauksien hoitoon liittyvä epävarmuus sekä tiedon ja taloudellisten resurssien puute. Lisäksi aineistosta nousee esiin biomedisiinisen tiedon vähäisyys. Kuvaan myös laajennetun matrilineaalisen ja matrilokaalisen perheen roolin lasten hoitoonhakeutumisessa. On ilmeistä, että miespuoleiset sukulaiset ovat tärkeässä roolissa lasten terveyttä koskevia päätöksiä tehtäessä.

Analyttisessä osassa tarkastelen, löytyykö aineistossa yhteyksiä lasten hoitoonhakeutumisen, äitien raportoiman hoidon, kontekstuaalisten muuttujien ja lapsuuden ajan kuolleisuuden välillä. Perherakennetta koskeva tärkein havainto oli, että niiden äitien lapsilla, joilla äidin eno matrilineaalisen perhejärjestyksen mukaisesti oli ratkaisevassa asemassa päätöksiä tehtäessä kuolleisuus oli vähäisempää. Odotetusti modernien hoitojen suosiminen liittyi alhaisempaan kuolleisuuteen. Sen sijaan mikrotaloutta kuvaavat muuttujat ja koulutustaso eivät tässä aineistossa näytä olevan yhteydessä lapsuuden ajan kuolleisuuteen.

Yhteenvedona esitän, että kehitysmaiden lasten hoitoonhakeutumista koskevassa tutkimuksessa lasten huono terveydentila on medikalisoitu. Tällä tarkoitan sitä, että tutkimukset on rakennettu yksittäisiin tauteihin keskittymällä. Tätä tutkimusta varten haastetellut äidit korostivat kuitenkin sekä tiedollisten että taloudellisten resurssiensa puutetta. Tärkeä haaste jatkotutkimuksille onkin kehittää tutkimusasetelmia, joiden avulla saadaan tietoa tekijöistä, jotka joko estävät tai edistävät äitien mahdollisuuksia hoitaa lastensa sairaudet.

SUMMARY

It is known from previous research that the health status of Malawian children is very low. In this small East-African country the rate of under-five mortality is one of the highest in the world with 215 deaths per thousand live births. The most common causes of child mortality are typical for any developing country: malaria, malnutrition, anemia, respiratory infections, measles, and diarrhea. The reasons why these diseases so often turn fatal are not known. In the present study I examine the situation of children in Malawi from the point of view of health-seeking behavior. The research belongs to the field of medical sociology.

In the literature review I analyze studies on child health-seeking conducted in developing countries (n=120). The analysis consists of empirical and methodological observations. In the studies included in the material, there is a large variety of child health-seeking practices reported particularly in Africa. The most important methodological notion is that the focus of the studies is on cognitive issues: in the majority of the materials mother's the beliefs related to children's illnesses are compared to biomedical knowledge on diseases. There are relatively few studies with a different study design.

The field study that is included in the present research report was conducted in Lungwena, Malawi, in a rural setting. Field material consists of key informant interviews, Focus Group interviews and survey interviews (n=203 mothers). In the methodological part of the field study I assess different ways to read a set of materials like this.

Based on the fieldwork material I report two kinds of findings: descriptive and analytical. In the descriptive part I give details of mothers' perceptions about the most typical child health problems, their causes, prevention and care. One of the central findings in this part is that mothers consider different treatment options as resources. Juxtapositions between local treatment options and modern biomedical treatment were seldom pronounced during the interviews. Instead, typical for the accounts is self-expressed uncertainty. Interviewees also reported a lack of knowledge and economic resources. Additionally, exiguity of biomedical knowledge in the study area is obvious. I also describe the central role of the extended matrilineal family in children's health-seeking. It is apparent that male relatives play an important role in children's health status.

In the analytical part I examine the possible associations between child health-seeking and care customs as reported by mothers, contextual variables and childhood mortality. The most important finding related to family structure is that children in the families in which the maternal uncle had an important position experienced less childhood mortality than families with a different structure. As expected, preference of modern medications was associated with lower childhood mortality. Variables based on economic conditions and the educational level of family members are not associated with mortality in this material.

As a summary I conclude that in studies on child health-seeking that have been conducted in developing countries children's adverse health situation has been medicalized. By this I refer to the fact that studies mainly focus on diseases one-by-one. Mothers who were interviewed for the present study, however, emphasized the lack of both knowledge and material resources. An important challenge for the future research is to develop study designs that identify factors which either support or hinder the mothers' potential to manage children's illnesses.

ABBREVIATIONS

AIDS	Acquired immunodeficiency syndrome
AOR	Adjusted odds ratio
ARI	Acute respiratory infection
CHAM	The Christian Health Association for Malawi
DHS	Demographic and health survey
GDP	Gross domestic product
GNP	Gross national product
GOM	Government of Malawi
HTP	Health Transition Project
IMCI	Integrated management of childhood illnesses
IMF	International Monetary Fund
IMR	Infant mortality rate
KAP	Knowledge, attitudes, practices (survey)
LCSS	Lungwena child survival study
MOH	Ministry of health
ORS	Oral rehydration solution
ORT	Oral rehydration therapy
OR	Odds ratio
PHC	Primary health care
PPP	Purchasing Power Parity
SAP	Structural adjustment programme
TBA	Traditional birth attendant
U-5 MR	Under-five mortality rate
UN	United Nations
UNDP	United Nations Development Programme
Unicef	United Nations Children's Fund
WHO	World Health Organization

KEY TERMS

Gross Domestic Product (GDP) refers to all outputs produced within the geographic boundaries of a country, whether or not the producers were citizens of that country.

Gross National Product (GNP) excludes all outputs produced by foreigners.

Under-five mortality rate (U-5 MR) refers to the probability of dying between birth and exactly five years of age expressed per 1000 live births. It is synonymous with the term child mortality rate.

Infant mortality rate (IMR) is the probability of dying between birth and exactly one year of age. Additionally, first year of life can be divided into neonatal mortality (birth to one month) and post-neonatal mortality (one month to one year). IMR is expressed per 1000 births.

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1 INTRODUCTION AND OVERVIEW

The present thesis consists of three main parts: the first part situates the study and the second part reviews previous literature on child health-seeking in developing countries. The third part is based on empirical child health-seeking material that I collected in Lungwena, Malawi. This chapter will provide the guidelines for reading the text to follow by describing the background of the study, the initial stages in Malawi and the organization of the report.

Background

Children's health is one of the top priorities of international health programs operating in the developing countries. Also national governments put a lot of emphasis on children (Claeson and Waldman 2000). Despite the interventions of a range of agencies especially since the 1960s, the major era of decolonisation, children in developing countries still suffer from poor health much more often than their counterparts in the industrial countries. In the absence of morbidity data, mortality is getting the attention: in many poor countries 15–20 percent of children die before they reach the age of five (Unicef 2000).

The diverse agencies operating in international health have responded to the grim situation by actively expanding the sphere of modern health services into developing countries. The policy has been justified by the great potential of modern medical techniques especially on children's health conditions. It has been suggested that, with relatively cheap inputs, modern medicine is capable of significantly lowering childhood mortality (Leslie 1989, Unicef 1990).

Meanwhile, research reports have called attention to the fact that modern medicine does not arrive in a vacuum in developing countries. New imported health technologies do not replace previous methods but rather work to supplement these methods. The fact that people continue to use indigenous medicine after they have access to Western biomedicine is well documented (for references, see Adams 1988). As a result of primary health care policy and child survival programs, care options have increased and biomedical services co-exist with local methods. Thus, medical pluralism has also become the prevailing standard of illness management in developing countries. (Hamnett and Connell 1981, Lantum 1994, Janes 1999)

Another important empirical finding concerns the central role of lay care. Numerous studies have indicated that relatives, neighbors and other unprofessional caregivers provide much of the health care for children not only in developing countries but also globally. Usually, it is the mothers who carry the main responsibility for household duties including care of ailing children. A professional practitioner never gets to see most childhood illness cases. (Leslie 1989, Adetunji 1991, Mwenesi et al. 1995, Taylor et al. 1996) Thus, it is not sufficient to develop a clinically effective health technology and to make it available on a wide-scale basis. Efforts to improve child health in developing countries depend on the proper and timely actions of lay people, especially the women. A health technology must be utilized consistently and correctly at the household level in order to realize its potential to improve health. (Leslie 1989)

Malawi experience

The empirical part of the present report is based on fieldwork in Lungwena, a location in Southern Malawi.¹ Appendix 1 includes key indicators describing this relatively small and extremely impoverished country in Sub-Saharan Africa. When compared internationally, the situation of children in Malawi looks adverse. In the light of facility-based statistics, the children suffer mainly from health problems that are common in developing countries including malaria, anemia, respiratory infections, measles, diarrhea, and malnutrition. However, illness episodes often turn fatal: with its under-five mortality rate at 215, Malawi ranks as the eight worst in the global statistics (Unicef 1997). The leading biomedical causes for child mortality are malnutrition, anemia, respiratory tract infections, measles, and malaria. In all, these diseases are responsible for more than 80% of child fatalities.²

As I will describe in more detail later in part 3, Lungwena, the site of the field study, is a remote rural area located in Southern Malawi. Not much is known about the health status of children in this area. Neither their morbidity or mortality figures nor biomedical causes for deaths are recorded. For that matter, births are also left unrecorded. However, findings from an ongoing child survival study in the area give an infant mortality rate of

¹ The present study complements the Lungwena Child Survival Study (LCSS), a research project that looks into the state and determinants of child health in Lungwena.

² The data on Malawi is drawn from Mangochi District Health Report 1991, an unpublished report.

136 (Vaahtera et al. 2000) and under-three-year mortality rate 202 (Ashorn P et al. 2002) which are very close to the national estimation.³

This research report stems from my personal experiences in Malawi in 1993–1995 and irregular visits thereafter. I lived for twenty months in Mangochi, a small town close to Lungwena, and visited the study area on a regular basis. Several people whom I encountered both in Mangochi and in Lungwena introduced the child health puzzle that I am trying to join together. People told me exciting, and sometimes sad, stories about people seeking treatment for their health problems. I also learned that when someone fell ill, he or she often hesitated to use the services at the local health center, and especially those at the district hospital in Mangochi. Sometimes health care options closer to home were used for the sake of convenience. Sometimes people expressed their distrust in modern services. When an ailing person finally decided to seek help at a health care facility he or she was not expected to return back home but to die at the hospital ward. The district hospital in particular was considered as the last resort in the search for care. Furthermore, because people were often brought to the hospital only when they were very ill, many of them did die (Personal communication with Mr. Tamaona, Senior Clinical Officer at Mangochi District hospital).⁴

However, the late retreat to Western health care facilities that appeared to be common did not mean that people were not trying to retain good health. When someone fell ill, there was an array of health care options serving the population in Lungwena. The ailing person was in a position to choose between the newly opened government health center, various local healers and home remedies of a traditional or modern kind. All these care options were available and utilized for childhood illness, as well.

For a researcher interested in child health issues this was an eye opening starting point in a chain of discoveries. I realized that in a highly pluralistic health care setting like Lungwena, it was far too simple to state that many children die because they do not get adequate medical attention early enough. The scene in Lungwena was made even more interesting because of a fascinating socio-cultural setting. More specifically, the prevailing matrilineal family structure and its implications for child health are worth mentioning. An additional point of interest emerged from discussions with lay people: economic constraints set by poor material conditions were often mentioned in the course of discussions.

³ For estimates of infant and childhood mortality in Malawi, see Malawi Demographic and Health Survey 1992 (1994).

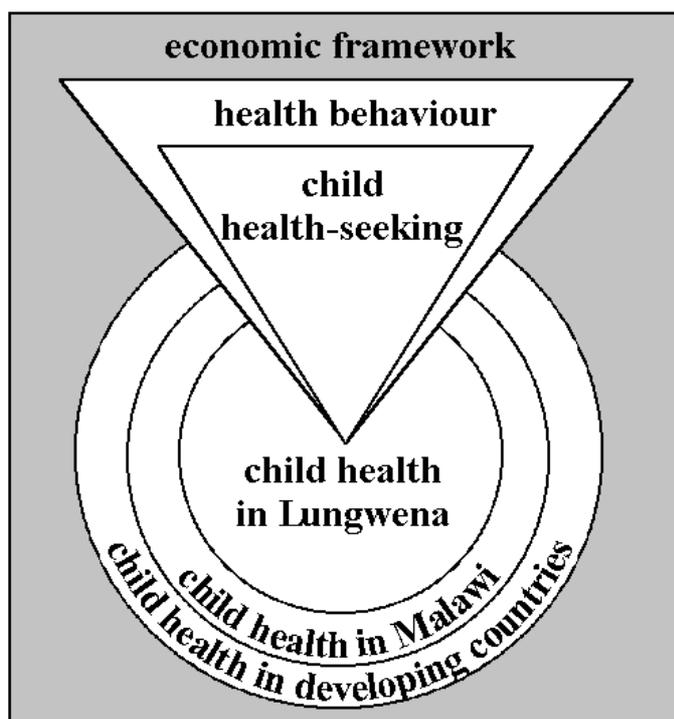
⁴ Similar notions about hospitals have been made in several others studies; see for example Bierlich 2000, Suomela 2001.

Based on the background considerations about child health in developing countries and on the Malawi experience, I set two broad aims for the present research project: The first aim was to examine child health-seeking in Lungwena in a more systematic manner. The second aim was to set the information on child health-seeking behavior in Lungwena in a larger conceptual frame by examining previous literature. The rest of this report will show that, in the course of the study, these straightforward aims turned out to be a goal that was not-so-simple to reach.

Thus, the key term of the report will be child health-seeking. It is an expression commonly used in child health literature. At this point I do not attempt to define the meaning of the concept. It is essential to notice that child health-seeking is a constructed expression in the sense that it is reshaped in each and every research project. Therefore, a key objective of the present research is to look at different aspects, definitions and connotations that are attached to child health-seeking. Therefore, at this point it suffices to say that child health seeking is taken to be the activities that aim at restoring children's health. The idea is also captured in a quotation from John Janzen who writes: “sickness is a departure and treatment an attempt to return” (Janzen 1981).

Organization of the report

The very term child health-seeking in the title of the report includes the two guiding elements in the design of the present research: a notion of child health and a notion of health related behavior. Graph 1 below gives an idea about the relationship of these main constituents of the study.



Graph 1. Constituents of the present research.

Organization of the report will be as follows:

- Part 1 situates the present study by introducing the context and the analytical approach. The circles in the graph indicate that the widest context is formed by child health in developing countries. Children's health conditions in Malawi form a more focused lens. The square depicts that I will additionally consider macroeconomic themes and child health as constituents of the context. The triangles in the graph represent the analytical landscape of the study. The themes consist of health related behavior in general and child health-seeking in particular.
- Part 2 reviews previous literature on child health-seeking in developing counties.
- Part 3 will deal with material that I collected during the field study. First I will discuss the methodology of the field study and after that, describe and analyze material from Lungwena.

In the final chapter I attempt to bring the themes together and make conclusions by discussing the findings, method and limitations of the study.

PART 1: SITUATING THE STUDY

2 CONTEXT: PERSPECTIVES ON CHILD HEALTH

The aim of chapter one is to provide a conceptual and practical context in which to situate the discussions on child health-seeking that will follow in part two and in part three. More generally, the context consists of a group of macro level trends that set confines to child-health-seeking. It is the widest frame of study and guides data collection and analysis. It goes without saying that context reflects decisions made by the researcher to include or to exclude certain aspects of theoretical and empirical environment.

Already at the early stages of the study I went to the library to check what kind of material databases would retrieve on child health issues. The long lists of titles indicated that it made no sense to grasp all that material inclusively. Therefore, the present chapter opens an assortment of perspectives into child health in developing countries. To that end, I chose to utilize a set of discourses and data that cover child health in developing countries in general and in Malawi in particular and to raise a number of highly selected issues that serve the purpose of the present research. The view to child health that I will submit in this chapter can be reduced to the following two themes:

- The first perspective is based on the current comprehension of the burden of children's diseases in developing countries and in Malawi. Data is drawn from biomedical research on incidence of diseases.
- The second, completing perspective exploits demographic data describing child mortality trends. This reveals the proportions of problems related to poor child health.
- The third perspective is based on macroeconomic indicators. It has been obvious for a long time that, in most locations, macroeconomic trends and child health are associated. Several studies have suggested that child mortality rates are related to income distribution between countries and within countries. Similarly, the main determinants of child health status typically include the real per capita household income.

The text is organized into two sections. The first of them examines these three perspectives in the case of developing countries. The second section is based on material from Malawi. However, I will start by discussing selected key terms that guide thinking at a linguistic level.

2.1 Key terms

With the choice of terminology one limits the scope of the research, and thus constructs the object of the study. Therefore, I will briefly look at the connotations and implications of two key terms that are crucial for the present study. These terms are *developing countries* and *child health*.

Developing countries

The expression *developing countries* is often thrown in to a discussion without further definition. The expression was coined in the 1950s, an era that placed great hopes on the developmental capacity of (at that time) colonized countries. Those countries were rather optimistically regarded as developing and were expected to follow industrial development of Europe and the U.S. rapidly.

In the dependency theory rhetoric of the sixties, the term that was used to refer to roughly the same group of nations was *underdeveloped countries*. Then, the reason for the poor status of these countries was seen to be their deprivation by world capitalism. Also the term third world refers more or less to the same nations. By the discovery of "*the fourth world*", "*least developed countries*" and "*newly industrialized countries*" the terminology has become even more versatile. (UNDP 1997, Unicef 2000)

For the purposes of the present study it is not necessary to review the details of discussion about ideas of development throughout the decades. It suffices to say that all the terms above have their connotations and related problems. Nowadays, however, the expression developing countries has become a rather neutral way to aggregate nations. Critics, however, say that the term implicitly assumes a linear path to development: developing countries are to follow the model of the developed countries in Europe and in North America. Thus, the agenda for development is determined from abroad by international organizations. (Zaidi 1994)

The next question is about the usefulness of lumping these countries under one category. There is a great deal of variety in terms of history, social and political structure and religion amongst the developing countries. There are, however, two characteristics that are typical to these nations: developing countries are economically poor and a site for the majority of the world's children.

Despite the progress that has been achieved in reducing poverty, figures for the developing countries are daunting. Additionally, the range of economic development has grown since the 1960s. About 1.3 billion people live on incomes of less than \$1 a day.⁵ In absolute numbers Asia has the largest number of people affected by poverty whereas Sub-Saharan Africa has the highest proportion of people in human poverty. Within these broad groups some people suffer more than others: in particular children, women and the aged are seriously struck. In these countries poverty is much more than a lack of income. It is reflected in all levels of society ranging from human and political rights to a personal lack of education, nutrition and to poor health. (Conrad and Gallagher 1993, UNDP 1997)

Table 1 below indicates that a large number of children live in the developing countries. The majority of the children (as well as the total population) are in Asia. However, Sub-Saharan Africa experiences the highest population growth in the world. Accordingly, the relative amount of children of the total population in Sub-Saharan Africa is the highest of all the geographical areas.

Table 1. Global distribution of the number children.

	Population under-5 in 1998 (thousands)	Total population 1998 (thousands)	% of population under-5	Population annual growth rate (%) 1990–98
Sub-Saharan Africa	100036	580939	17.2	2.6
Middle East and North Africa	42576	324970	13.1	2.3
South Asia	163209	1320094	12.4	1.9
East Asia and Pacific	160477	1837039	8.7	1.2
Latin America and Caribbean	54841	498220	11.0	1.7
Former socialist countries and Baltic states	31712	475350	6.7	0.3
Industrialized countries	50598	847998	6.0	0.6
Total in the world	603449	5884610	10.2	1.4

Source: Unicef 2000

⁵ For the purpose of global aggregation and comparison, the World Bank often uses reference lines set at \$1 per day in 1993 Purchasing Power Parity (PPP) terms. For details see www.worldbank.org/poverty/mission/up2.htm.

Child health

Child health is a rather vague term that is used loosely to refer to very different levels and aspects of the same phenomena. Therefore, there remains another key question related to the terminology: what does one mean by child health in the context of developing countries? It is obvious that we speak of health in different ways in various contexts. Generally, any attempt to define health encounters its first obstacle in the fact that we are usually made aware of well being mostly in its absence (see Das 1990, who also talks about philosophical obstacles in defining health). There have been, of course, several attempts to defining health. These attempts can be divided between those that apply a negative definition of health and those that apply a positive definition of health. For example, the biomedical view of health is clearly negative: that is the absence of disease. By contrast, a well-known definition that is offered by the World Health Organization takes a more positive stance: health is a state of physical, social and mental well-being. (Nettleton 1995⁶)

Unfortunately these kinds of definitions have had very little to offer child health in developing countries. The stereotypical media image of skinny children with big bellies suffering perhaps from tropical diseases or severe malnutrition coincides well with the scientific discourse: it is not the custom to refer to child health in developing countries. The health status of children in developing countries is most often measured by the non-existence of death or, in other words, in terms of survival. The reason for this is that death is a readily defined state and relatively easy to measure as compared to health and illness. Despite the recognized limitations of mortality-based data, it is often the only kind of information most of the developing countries can present. In the absence of morbidity figures, death incidences from different causes may be aggregated. Thus high child death rate or infant mortality rate have been used to indicate poor child health status. Studies that would describe or analyze determinants of good child health in developing countries are practically nonexistent. (Cornia 1984, Coreil and Mull 1990, Feachem et al. 1991)

Additionally, because a great majority of death incidents in developing countries occur during childhood, general decline in mortality level is assumed to indicate decline of child mortality. However, Alaka M. Basu (1987) has very intriguingly concluded that gains in mortality at the young childhood ages lag behind improvements at older ages. It is the age group of 1–4 years that have become the most marked globally for mortality differentials.

⁶ In addition to those above, Nettleton (1995) distinguishes between approaches that emphasize functional and experimental health.

Historically, children in developing countries have been on the research agenda for a relatively short period. Many of the first missionaries had medical training, but their work remained rather limited from a research perspective. The early anthropologists were not specialists. Therefore they considered health related matters in the context of general studies of beliefs and practices of specific cultural groups. To them, explanations of health and illness fell into two classes: those adopted by Western medicine and those adopted by primitive cultures. (Stainton Rogers 1991, King and King 1992, Conrad and Gallagher 1993⁷) Poor health of children gained large-scale attention and action only in the late 1950s and early 1960s when most of the remaining colonies in Africa and the Caribbean became independent (Unicef 1996).

2.2 Child health in developing countries

The patterns of child morbidity and mortality in developing countries differ substantially from those in the industrialized countries. Below, I will examine the burden of childhood diseases and demographic trends in these countries.

2.2.1 Burden of childhood diseases

Most of the developing countries largely lack adequate registration systems on child morbidity and mortality. Therefore, population-based data on child morbidity in these countries is practically non-existent. Nevertheless, immediate biomedical reasons for child fatalities are relatively well documented. There are a few diseases that cause the vast majority of infant and child deaths. Typically, there is a high level of infectious and parasitic diseases, particularly diarrhea, acute respiratory infections (ARI) or pneumonia, malaria, and measles. It has been estimated that globally these diseases cause seven out of ten deaths in children. (Gove 1994, Tulloch 1999) It has also been noted that young children in developing countries generally tend to suffer from several diseases at one time (Blacker 1991).

Furthermore, there is a high prevalence of malnutrition in many locations of the developing countries. Epidemiological evidence strongly suggests that ordinary childhood diseases, especially diarrhea, are more likely to be fatal when they occur among children

⁷ I will come back to this in section discussing analytical approaches to child health.

who are severely malnourished. Therefore, for the major part, death incidents are the consequence of common diseases that have been complicated by underlying malnutrition or other health problems. The synergism between malnutrition and diseases leads to a so-called vicious circle that is central in the process leading to death. Interaction between multiple disease episodes and malnutrition makes the measurement of separate effects of diseases difficult. In a situation like this, a single diagnosis may not be possible or appropriate.⁸ (Feyisetan and Adeokun 1992, Feachem et al. 1991)

However, it may be concluded that in biomedical terms, the commonest causes of child mortality are diseases that are relatively simple to cure. It has been suggested that as many as half of childhood deaths in the third world may be averted through inexpensive and relatively simple (Western) health care practices (Unicef 1990). However, most sick children present with signs and symptoms of more than one of these health problems and may need a combined therapy for several conditions. (Tulloch 1990) The challenge that remains for research is how to combine the lessons learned for a more efficient and effective management of childhood diseases.

2.2.2 Demographic trends

This chapter deals with demographic data on child mortality: levels, trends and variations. The geographical locus of the first part is in developing countries with a particular focus on Sub-Saharan Africa.

⁸ Therefore, at the beginning of the 1990s the WHO and Unicef launched a global initiative to reform health care received by sick children. The core of this initiative, known as the Integrated Management of Childhood Illness (IMCI), is a clinical practice guideline. The guideline addresses the case management of clinically ill children under the conditions typical of peripheral facilities, focusing on the most common serious conditions (diarrhea, malaria, measles, and malnutrition), and often a combination of them. (www.unicef.org/programme/health/document/workingp.pdf)

Developing countries

Table 2 below shows regional under-five mortality rates at three different points of time. It is obvious from the table that global variation has been and still is extremely large: developing countries lag behind industrialized countries in mortality reduction.⁹

Table 2. Regional under-five mortality rates.

	Under-five mortality rate		
	1960	1980	1995 ¹⁰
Sub-Saharan Africa	255	203	175
South Asia	237	179	121
Middle East and North Africa	240	142	60
East Asia and Pacific	200	80	55
Latin America and Caribbean	157	86	47
Industrialized countries	43	17	8

Source: Unicef 1995, 1997

There are few doubts that infant and child health has improved in developing countries, too. Some of these countries began a sustained mortality reduction already before the 1940s but in most of them, the real take-off for mortality decline occurred only after the 1950s. The first couple of decades during this period saw remarkable gains of life expectancy and decline in child mortality in nearly every developing country.

The rate of decline increased dramatically between 1960 and 1979, reaching a peak of 12% in the second half of the 1970s. It remained at this level throughout the 1980s. A substantial slowing of the rate of decline in child mortality marked the period after the mid 1980s. (Cornia 1984, Basu 1987, Gaisie 1989, Ahmad et al. 2000, Claeson and Waldman 2000)

⁹ Demographic data is available at national level for almost all the countries in the world. Especially important for demographers working with developing countries has been information from the global Demographic and Health Surveys Programme (DHS) that collected data since its inception in 1985. DHS was established at the Institute for Resource Development, Inc. and was functional in 1984–1999. It provided data and analysis on the populations, health, and nutrition of women and children in developing countries. From 1999 onwards the name was changed to DHS+ to reflect a new mandate that incorporates traditional DHS features with expanded content on maternal and child health. Before the DHS Programme, in 1972–1985, World Fertility Survey (WFS) conducted surveys of fertility, family planning, and infant and child mortality in more than 60 countries. (Rutstein 2000, DHS web site at www.measuredhs.com)

¹⁰ As was explained earlier, survey data from Malawi for the present study was collected mainly in 1995.

It is worth noting here that the constraints of material resources can be overcome. Some of the developing countries have reached health levels that are far above those that would be dictated by their national economies. Amongst the superior health performers are often mentioned are Sri Lanka, China, Burma, Jamaica and Cuba. Amongst poor health achievers that fall below their income rank are, for example, several oil producing countries. (Caldwell 1986)

Impressive variations of childhood mortality within developing countries have also been documented. Probably the most remarkable success story is the Indian state of Kerala where life expectancy is almost at the level of industrialized countries (Caldwell 1990, 1993). Another example of intra-national differences comes from Mali where different groups living in the West African savannah in similar environment had differing infant mortality rates but similar levels of adult mortality (Hilderbrand et al. 1985).

Sub-Saharan Africa

Out of all the regions that are shown in the table above, Sub-Saharan Africa is clearly the poorest performer. If we accept the idea that child mortality can be used as an indicator for poor child health, children's health conditions in the Sub-Saharan area are the worst in the world.

In sub-Saharan Africa, too, current child mortality rates reflect a long decline and major improvements have been achieved in health conditions. Althea Hill (1992) summarizes the magnitude of mortality decline by noting that in the Africa of the 1950s such countries were common where 30 to 40 percent of children died before achieving their fifth birthday. Similarly, life expectancy seems to have risen from a low of 30 years in the 1930s to 43 years by 1960s. In 1995, the year of the field study to be discussed in part three of this report, life expectancy at birth was 51 years for the Sub-Saharan population. (Unicef 1997)

Despite massive international programs to promote child health that took place in the 1980s in Sub-Saharan Africa, progress for children's health status has been slower and more uneven there than in other regions of the world. Child mortality declined in Sub-Saharan Africa less than half as quickly as in South-Asia. When compared to Latin America, North Africa and the Middle East, the rate child mortality decline Sub-Saharan Africa was only about one-fifth. Additionally, the pace of child mortality reduction in Sub-Africa has been slower since the 1980 than it was in the 1960s and in the 1970s. Of the 30 countries with the world's highest child mortality rates, 27 are in Sub-Saharan Africa. (Brockerhoff and Derose 1996, Unicef 1996, Claeson and Waldman 2000)

Regional trends, however, disguise mortality differentials between nations and within nations. Mortality reduction amongst the developing nations has taken a disproportionate pace and the burden of childhood deaths is currently unevenly distributed. Notwithstanding the fact that sub-Saharan Africa as an entirety performs poorly in the child health field, in the area there is notable variation when it comes to the rate of decline of childhood mortality and prevailing mortality rates. First and foremost, demographic literature pays attention to the overall marked difference between the Eastern and Western part of the African continent¹¹. In the Western side, child mortality rates are notably higher. However, there are some exceptions to that rule, too: Congo, Ghana and Cameroon have managed to lower their child mortality to the level prevailing in the nations situated East bound. (Feachem et al. 1991, Hill 1992, Brockerhoff and Derose 1996)

The next chapter (2.4.2) will show that Malawi is an exception in the East African child mortality level: child mortality in Malawi is higher than in any of the neighboring countries except the war ravaged Mozambique (Unicef 1996).

2.3 Macroeconomic trends and child health in developing countries

Lorna Amarasingham Rhodes (1996) has argued that “major problems in medicine are also problems of society: the health system is so intimately tied to the broader society that attempts to study one without the other are misleading. Difficulties in health and medical care emerge from social contradictions and rarely can be separated from those contradictions”. For that reason, the aim of the section below is to look into child health from a macroeconomic perspective. Basically, all the key variables on which economic policy operates can be given a child health dimension (Micklewright 2000). Below, I will consider some links between macroeconomic trends, mainly gross domestic product (GDP), and the health sector. The text is organized by three distinct historical phases in macroeconomic development. The purpose of the approach is to trace the implications of these major stages in economy and economic reasoning for health. I am aware that the space only allows a superficial presentation that necessarily simplifies the past. This summary, however, serves the purpose of the present study by giving a time perspective to current thinking.

¹¹ The terms Western Africa and Eastern Africa refer to the World Bank’s operational groupings but also correspond to the common usage. See Hill (1992) for details.

The text draws upon several sources. Firstly, critical medical anthropologists in particular have questioned the usefulness of a disease-based approach to ill health and committed themselves to understanding the distribution of power and wealth and its effect on health and healing. According to critical medical anthropology, health is profoundly a political issue. The fact that child mortality has declined to the present low level in the industrialized countries is an indication that, with political will, the same would be possible in the developing countries too. Even if critical medical anthropologists have seldom been able to escape their theoretical “ivory tower” and to translate these principles into practice their thinking has inspired the field. Secondly, in recent years, a so-called ecological framework applied within medical anthropology has emphasized the importance of a set of causal elements including material and economic conditions. (Morgan 1990, Pelto and Pelto 1997, Singer 1998¹²)

The third source of materials come from epidemiological studies. Consonant with critical medical anthropology in its aim to examine associations between economy and health status of people are many studies that utilize epidemiological methods.¹³ These kinds of research designs may be found within, for example, development economics, population studies and demography.

2.3.1 Early phase: sustained economic growth up to the early 1970s

From the late 1940s up to the 1970s, the post-war boom flourished and international economic conditions favored growth. Keith Griffin (1988) has called the earliest years of this era “the brave new world”. This was a period of optimism and top priority was given to economic growth and industrialization, either in terms of modernization theory or dependency theory. (Rapley 1998)

Modernization theory, which emerged and flourished in the 1960s, stated that developing countries had stagnant economies and traditional societies. Existing problems were defined as a set of difficulties easily overcome with the introduction of Western

¹² In this article, Merrill Singer who is an important developer of the field provides an overall picture of the positions and concerns of critical medical anthropology. Originally critical medical anthropology was born from the tension between applied medical anthropologists working in clinical settings and those working in academic settings. The former co-operated with medical scientists in health care while the latter theoretically challenged the cognitive boundaries of health care and politics. Critical-clinical debate was at its peak in the 1980s and early 1990s and mostly took place on the pages of *Social Sciences and Medicine*.

¹³ The definition of epidemiology has no clear cut boundaries. In this text epidemiology refers to any quantitative research design with epidemiological techniques.

knowledge and new technology. Theorists saw the industrialized countries as guiding the developing countries through aid and investments. Scholars suggested that a modest amount of aid given for a relatively short period of time would be all that was needed for the “take-off” or “big push” for these economies. There was a widespread agreement that the benefits of economic growth would “trickle down” automatically to the lowest income groups. (Foster 1977, Griffin 1988, Stone 1992, Rapley 1998)

Even if economic growth sustained, the emphasis of development thinking shifted quite markedly in the beginning of the 1960s as dependency theory gained a dominant position. Where previously the priority of development was on growth, now growth was taken more or less for granted. However, skepticism about the positive effects of economic growth rose and researchers became concerned with issues such as poverty-alleviation policies and distribution of income. The terminology of the era included phrases such as “redistribution of growth”, “reaching the poorest of the poor” and “satisfying basic needs”. For example the World Bank initiated its “poverty oriented” programs during that period. Concurrently, disbelief on the effectiveness of foreign aid began to increase. (Griffin 1988, Mull 1990, Stone 1992, Rapley 1998)

In accordance with general ideas on development, the dominant thesis during the earliest part of this era was that mortality decline observed in the industrialized countries was primarily due to the success in health technologies. Accordingly, technology also captured the centre stage also in the attempts to promote health in developing countries. Until the 1950s, attempts to import biomedically-oriented health care in the developing countries largely consisted of the promotion of hospital-centered medicine and curative services as they had evolved in the industrialized nations. These efforts were initiated in Africa by missionary groups, in Asia by government groups and in Latin America by a mixture of the two. Hospitals were built in the urban centers of the developing countries; the countryside was largely left outside biomedical services. (Griffin 1988, Coreil 1990, Mull 1990, Stone 1992, Rapley 1998)

Foster has called this rather ethnocentric, technical assistance view of the health sector “the silver platter approach” because local society and culture, if considered at all, were seen as irrelevant to the development process (Foster 1977). It was expected that peoples in the developing countries would naturally accept and adopt the “superior” knowledge and technology (Stone 1992).

When the colonial powers departed from the developing countries they almost invariably left behind serious health problems and health service systems that were concentrated in the few urban centers where the colonial rulers had lived (Najman 1989). However, by the 1950s, planners and administrators had already started to realize that

hospital-based health care provision in developing countries had failed. Hospitals were increasingly described as “disease palaces”. Small number of anthropologists who had entered the field of international public health starting from the 1950s onwards played an important role in promoting the human factors in technological development. (Foster 1977, Coreil 1990) An essential development strategy of the 1960s was community participation in health planning. Accordingly, health programs were to be “culturally appropriate” and to include "social soundness components". (Coreil 1990, Stone 1992)

Two of the main international agencies at the health arena, the World Health Organization (WHO) and United Nations Children's Fund (Unicef), were inaugurated soon after the Second World War, in 1948 and in 1946, respectively. During the next three decades to follow, they established highly-targeted vertical programs aimed at eliminating specific diseases such as yaws, malaria and schistosomiasis. (Mull 1990, Koivusalo and Ollila 1996)

2.3.2 Middle-phase: economic growth leveled off in the 1970s

As early as the late 1960s, inflation began to rear its head in many developing countries due to declining productivity and rising incomes. In the beginning of the 1970s, world was shaken by the first of the oil crises and economic growth leveled off considerably. The majority of the developing countries were oil importing and thus faced the same leap in energy costs as did the industrialized countries. In the mean time, global recession reduced demand for the products that developing countries exported. As John Rapley (1998) explains: while the industrialized countries sneezed, developing countries caught pneumonia with this new turn in the international economy. After these incidences, the sustained rapid growth could no longer be taken for granted. The countries worst affected by the economic turbulence were those of Sub-Saharan Africa. Development thinking started focusing more and more on poverty alleviation. (Mosley et al. 1991)

At the same time, frustration over development assistance grew in the industrialized countries and changes were demanded. An example of this is the WHO 1973 decision to collaborate with, not assist, the developing countries (www.who.org). It had also become evident that the disease approach to health and vertical programs met with little success. Especially the failure of malaria eradication program was a disappointment within the international organizations (Mull 1990, Koivusalo and Ollila 1996). Starting at the beginning of the 1970s, primary health care (PHC) policies were widely adopted amongst

the developing countries. PHC was designed as a way to deliver at least minimal health care to the poor, remote rural segment of developing countries. (Stone 1992)

It was in this atmosphere that the Alma Ata conference took place in Soviet Union in 1978. The conference, that was jointly sponsored by the WHO and Unicef, did not really create new policy lines but was rather an endorsement of ideas that had reached popular consensus during the previous decade (Mull 1990). In Alma Ata, earlier frustration over development assistance was turned into policies by officially introducing PHC¹⁴ and *Health for all by the year 2000*, the famous catchphrase of the conference. The meeting resulted in the widespread adoption of PHC policies as an instrument to reach the "rural poor with appropriate technology" among developing nations. After the conference, there was a de-emphasis on urban-based, high technology, curative medical care and movement towards community-based preventive health programs. (Coreil 1990)

2.3.3 The most recent phase from the 1980s onwards: recession and SAPs

Probably the most important factor affecting the resources available to the health sector and the ensuing delivery of health-care today is the economic crisis, which confronts almost all developing countries (Zaidi 1994). Starting in the early 1980s, earlier stagnated economic indicators turned to the negative side and the majority of the developing countries faced an acute economic recession. National economies had to cope with worsening budget and balance-of-payment deficits and slow improvement of the social indicators. The situation was especially critical in Sub-Saharan Africa. Over 1980–1995, the area experienced a strong recession. If population growth is factored in, incomes per capita become slightly to moderately negative in most of the countries. The economic hardships of the past two decades have left three-quarters of the people surviving on less than US \$2 a day. (Cornia and Mwabu 1997, Mosley et al. 1991)

In the past two decades, powerful international trends have swept over the health sector in developing countries. The rise of conservative governments in Europe and North America forced the international financial bodies to adopt a neo-classical policy. For example the World Bank suddenly abandoned its earlier poverty alleviation strategy and shifted to a neo-classical approach in the 1980s (Rapley 1998). Especially in Latin America

¹⁴ Immediately after the conference discussions about the meaning of PHC arouse. Two of the major approaches were comprehensive or horizontal PHC and selective or vertical PHC. For a review of this debate see Mull (1990).

and in Africa, many countries found themselves badly indebted to international agencies and thus subject to conditions set by their creditors. Under these premises, international financing institutions and the Western donor community aggressively promoted a neo-classical approach to development. Programs were designed to shrink the state and liberate the market. (Griffin 1988, Sahn 1996) In the developing countries, neoclassical theory has been embodied in structural adjustment policies (SAPs) (Rapley 1998).

Change in the political and economic climate has had rapid effects on the health sector. Due to SAPs, there have been considerable changes concerning the financing and provision of health services. Under SAPs, health services were defined as commodities that could be delegated to the market sector with the exception of some basic aspects of public health. Privatizing state enterprises, including health care, is a key element to structural adjustment and has been used as a part of loan conditions. SAPs with the reduction in public spending became synonymous for user fees or other community-based financing mechanisms in many developing countries. (Cornia and Mwabu 1997, Janes 1999, Koivusalo and Ollila 1996) Even if the Alma Ata conference strongly emphasized a comprehensive approach to health, the rhetoric was stronger than has been its implementation in practice. Development cooperation is, in fact, increasingly focusing on separate health problems that are to be solved by narrow universal and technical solutions. (Koivusalo and Ollila 1997) Not unexpectedly, SAPs have been associated with increases in infant mortality and malnutrition in country case studies (for examples, see Anand and Chen 1996).

2.4 Child health in Malawi

Very little exact child health related information is actually available from Malawi. Several surveys have provided information on life expectancy at birth. It rose from 37 years in the late 1950s to 46 by 1996. Yet it was considerably lower than the regional estimate for Sub-Saharan Africa. (UN in Malawi and GOM 1993, Unicef 1996) Towards the end of the decade life expectancy fell again to 40 years (Unicef 2001). Low life expectancy at birth is an indicator of the fact that the health status of the Malawians is very low. A major factor contributing to the low life expectancy is very high child mortality. It has been estimated that children under five years old account for 57% of all the deaths in Malawi (Banda 1993).

2.4.1 Burden of diseases

Unfortunately no information about childhood morbidity and mortality is collected on population level in Malawi. Therefore, all data is facility based and thus rather unreliable (Banda 1993). In table 3 below are shown causes of morbidity for children at Mangochi district hospital, which is the closest hospital to the area of field study.

Similarly, due to a lack in vital statistics, causes of children's deaths are only known for in-patients in selected hospitals. In the light of information from Mangochi district hospital shown in table 4 above it appears that the great majority of health problems in Malawian children are typical for any developing country with infectious diseases taking a great toll. Importantly, however, malnutrition is a leading cause of child mortality in Mangochi hospital. It is estimated that more than half of pre-school aged children in Malawi suffer from chronic malnutrition. Nearly one in every two children under five is short for his/her age and one in four is underweight. (World Bank 1996)

Table 3. Causes of under-five mortality in Malawi.

Disease or condition	%	Cumulative %
Malaria	19	
Malnutrition	17	36
Anemia	13	49
Pneumonia	13	62
Measles	11	73
Diarrhea	8	81
Perinatal mortality	4	85
Other causes	15	100

Source: UN in Malawi and GOM 1993

Table 4. Leading causes of in-patient mortality for 0–4 year-olds at Mangochi district hospital.

Disease	n	%	cumulative %
Malnutrition	96	26.1	26
Anaemia	81	22.0	48
Respiratory tract infection	57	15.5	64
Measles	37	10.0	74
Cerebral malaria	32	8.7	82
Diarrhea	21	5.7	88
Neonatal sepsis	16	4.3	92
Meningitis	15	4.2	96
AIDS	7	1.9	98
Tuberculosis	6	1.6	100
Cumulative	368	100	100

Source: Mangochi District Health Report 1991

It is worth mentioning that under President Hastings Kamuzu Banda's rule until 1994, public discussion of AIDS (acquired immunodeficiency syndrome) was mostly forbidden (Mhone 1996, Lwanda 2002) This may also have caused underreporting of AIDS in public reports. Furthermore, this might explain the small number of AIDS mortality cases reported in hospital statistics.

2.4.2 Demographic perspectives

There is only one East-African country, Malawi, with a West African level of child mortality. It stands out as an exception to the general rule of relatively light childhood mortality in East and Southern Africa. (Timaeus 1991, Hill 1992) While the earlier data are very rough, there can be no doubt of an overall high mortality level of Malawi in continental ranking (Hilderbrand et al. 1985, Feachem et al. 1991, Brockerhoff and Derose 1996). With its infant and under-five mortality rates,¹⁵ which during the field study were estimated at 135 and 234, respectively, Malawi ranked eight worst in the world (Unicef 1997). This means that nearly one in seven children died before his/her first birthday and nearly one in four children did not reach his/her fifth birthday.¹⁶

Additionally, there is evidence that the country has apparently at all times been far outside the Eastern child mortality range (Feachem et al. 1991, Hill 1992, Ahmad et al. 2000). A historical comparison of a cluster of East African countries in table 5 below reveals that out of these countries, Malawi has had the highest under-five mortality rate throughout the period when data has been available.

Even though significant child mortality decline has taken place, the percentage of decline in under-five mortality has been rather modest. In conclusion, Malawi has not been able to achieve child mortality levels that are commensurate with those of its neighbours.

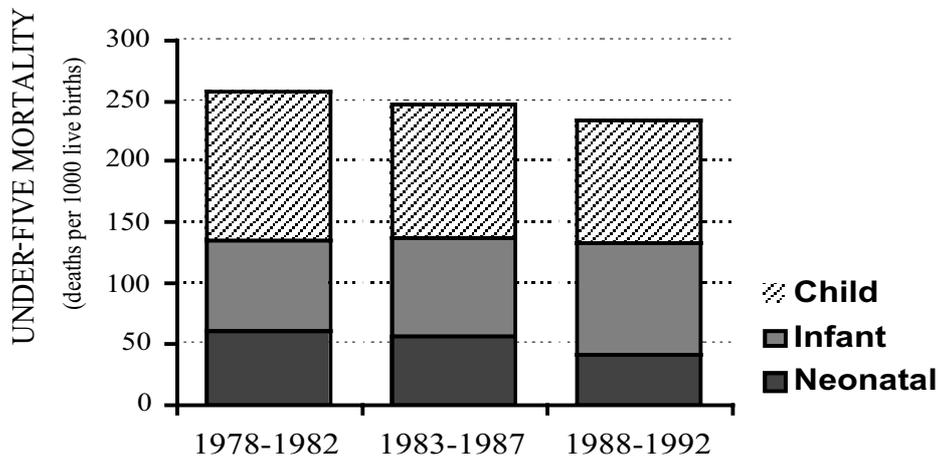
¹⁵ Infant and under-five mortality rates require exact data that is usually not available in Malawi. Therefore, as I will explain in more detail later, in the empirical part of this report the term childhood mortality is used as a more general expression to refer to the shortcomings of the data.

¹⁶ The text is based on data presented by Unicef. United Nations Development Programme (UNDP) shows slightly lower mortality figures for Malawi: infant mortality rate is 147 and under-five mortality rate is 219 (UNDP 1997). However, all these data are only broad indicators since there is no formal requirement in Malawi to report births and deaths. Even facility-based statistics on in-patients are limited, as they are poorly maintained (WHO 1993).

Table 5. Child survival trends in selected East-African countries.

	Under-five mortality rate			Average annual rate of reduction (%)		Global under-5 mortality rate rank
	1960	1980	1996	1960–80	1980–96	
Malawi	365	290	217	1.1	1.8	8
Mozambique	280	280	214	0.0	1.7	9
Zambia	213	149	202	1.8	-1.9	13
Zimbabwe	181	125	73	1.8	3.4	65
Tanzania	240	176	144	1.6	1.3	29
Sub-Saharan Africa	257	197	171	1.3	0.9	----

Source: Unicef 1998



Graph 2. Child mortality in Malawi by five-year periods (1978–92).

Source: Malawi Demographic and Health Survey 1992 (1994)

The Malawi demographic and health survey (DHS) from the year 1992 is the most reliable source of information containing detailed data on the health status of Malawian children for the time of the field study. Data from the DHS is shown in graph 2 above.

There are several ways to read the graph depending on which aspects of the data one chooses to emphasize. It is clear that the overall mortality of Malawian children has slowly decreased during the past twenty years. Infant mortality (from birth to one year) seems to have remained fairly constant but age pattern within it has undergone some changes: neonatal deaths (from birth to one month) have decreased by about one third. At the same

time, post-neonatal mortality (from one month to one year) has increased almost identically and eaten up the positive development. Thus, more infants stay alive a little longer than earlier. For the most part, mortality reduction has taken place in the age group from one to four years age group.

Furthermore, as table 6 below indicates, there is notable variation in child mortality rates between the different regions of Malawi. Information on the determinants of these irregularities and their determinants is haphazard and almost totally lacking. The country is traditionally divided into three administrative regions, North, Central and South. According to the Malawi DHS (1994), guardians in the Central region were less likely to take their ill children to a modern health facility than the guardians in the North or in the South.

Similarly, inhabitants in the Central region claimed to need double the amount of time to travel to the nearest health facility despite the fact that the actual distance was comparable in all three regions. (Malawi DHS 1994)

Interestingly, Althea Hill (1992) who has examined data from Malawi and neighbouring countries (Zambia, Tanzania, and Mozambique) points at behavioral differences as an important factor contributing to child mortality. For example in the Eastern province of Zambia, which is ethnically and culturally very similar to Malawi, nearly 30% of children died before the age of five as compared to around 20% for Zambia as a whole.

Additionally, Ezekiel Kalipeni (1993), a Malawian researcher, has shown that maternal education is an important determinant in explaining the observed differences in child mortality rates and behavior but other factors are also needed.¹⁷ He concludes by suggesting that local customs in the communities contribute to differences in child mortality rates.

Table 6. Infant and under-five mortality in Malawi by regions.

Region	Infant mortality	Under-five mortality
Northern	120.7	201.9
Central	130.2	261.6
Southern	144.3	230.0

Source: Malawi Demographic and Health Survey 1992 (1994)

¹⁷ The next chapter will include a discussion about educational levels in Malawi.

2.5 Macroeconomic trends and child health in Malawi

There are many ways to write a story about child health in Malawi. In advertising material the country is often called “*The Warm Heart of Africa*”. She has also been called "the country where silence ruled" (referring to the dictatorial era of the former president Banda), "an example of Afro-capitalism" (referring to the market oriented export policy) and "an imperial slum" (in regard to the lowest per capita income of any British colony in Africa at independence). (Grauers et al. 1997, Pryor 1990, Mkandawire 1983) There is general agreement, however, that prevailing poverty is the predominant denominator for the national situation: the country is grappling with a scarcity of resources.

2.5.1 Macroeconomic trends

Before the British came to Malawi, the level of economic development in the country was very low. The colonizers did little to alleviate problems. Thus, at its independence in 1964 Malawi was one of the poorest countries in the world. (Pryor 1990)

After independence, the Malawian economy appears to have followed international trends closely. The first 15 years following independence, up to 1980, the country registered strong growth. The annual real growth rate of gross domestic product (GDP)¹⁸ averaged over 6%.¹⁹ Even in per capita terms, GDP increased 3% annually. This good economic performance resulted from rapid expansion of export-oriented estate agriculture, which was supported by favorable world prices for tobacco, tea and sugar. (Buckley 1996, Kaluwa et al. 1992, Pryor 1990) Also other macroeconomic indicators, such as gross domestic investments and domestic savings, were favorable. The balance of payments was under reasonable control until 1977 (Owens 1997).

Peggy Owens (1997) lists three problems that caused the earlier success to interrupt in the beginning of the 1980s:

- Malawi is an oil-importing country and the first global oil crisis in 1973–74 damaged the economy seriously.
- Due to significant decline in demand, tobacco and tea prices fell which caused a 35% decline in terms of trade between 1977 and 1980.

¹⁸ Gross Domestic Product is commonly used to measure a nation's economic well-being. However, GDP includes only goods and services that pass through organized markets. Additionally, GDP does not reflect the distribution of means. (Baumol and Blinder 1991)

¹⁹ Some authors, for example Harrigan (1991) give a slightly lower estimate.

- Civil war in Mozambique led to the disruption of normal trade routes to the sea and an influx of up to million of refugees.

In the mean time the domestic economy collapsed as a consequence of a doubling in government expenditure between 1978 and 1981. External debt rose from 123 million US dollars in 1970 to 821 million in 1980 (Kaluwa et al. 1992). This combination resulted in no growth of GDP in 1980 and a decline of 5.5% in 1981.

It was under these circumstances that Malawi started the SAPs.²⁰ The country introduced the first macroeconomic stabilization program based on the International Monetary Fund's (IMF) arrangements in 1979, the first World Bank-supported SAP in 1981 and the first rescheduling of its international debt in 1983. During 1980–93, Malawi was signatory to no fewer than ten separate SAPs administered by the World Bank.²¹ (UN in Malawi and GOM 1993, Orr 2000)

Following 1982, the economy began to regain positive growth but toward the end of the 1980s, GDP again plunged to the negative side. Simultaneously annual inflation grew as high as 31.5%. (Kaluwa et al. 1992) Since 1989, the macroeconomic performance of Malawi has demonstrated a positive response to the adjustment measures (UN in Malawi and GOM 1993). Yet, Jane Harrigan (1991) who formerly worked for the government of Malawi, has described Malawi's economic performance under the SAPs as “disappointing”. The measures taken by the Malawian government and the international donor community failed to bring about sustainable improvements in the economy. Neither was there any evidence to suggest poverty alleviation. (van Frausum and Sahn 1996)

Jane Harrigan (1991) has characterized economic policies of the country as “centralized, efficient, personal dictatorship in the form of the Life President Banda”. Public debate on governance was not allowed (UNDP 1995). In October 1992, President Banda decided to allow a vote on a multi-party system. A year later, in October 1993, he became seriously ill and had to rush to South Africa for neurological surgery. This created a power vacuum in the country. (Grauers et al. 1997)

At the earliest historical instance when criticism was politically plausible, in 1993, the United Nations published an analysis of the situation together with the Government of Malawi. The report gave a clear indication that poverty was widespread. Ordinary people in Malawi had not profited from the earlier vigorous macroeconomic growth or the more recent reforms. The value of GNP per capita in Malawi was extremely low. Depending on

²⁰ For a more detailed description of the macro-economic situation, refer to Harrigan (1991).

²¹ For a description of the contents of the SAPs, refer to Harrigan (1991) and Kaluwa et al. (1992).

the source, the estimated GNP per capita in the 1990s remained between US\$ 132 and US\$ 230 per capita per year. With these figures the country ranks amongst the poorest 10 to 15 countries in the world. In the Sub-Saharan region, only war-stricken Mozambique and Tanzania have lower GNP per capita. (UN in Malawi and GOM 1993, UNDP 1997)

First and foremost explanation to the disproportional economic figures in Malawi is the high population growth that is very rapid even by Sub-Saharan standards. The country has more than doubled its population since independence. In 1996, the population was estimated to number 11 million. If the growth remains at the present level the population will double in the next 20 years. At the prevailing birth rate it will be difficult for the economy to experience any positive real growth. (UN in Malawi and GOM 1993, WHO 1993, UNDP 1995, World Bank 1996)²²

Inclusion of poverty as a deterring factor in the context of the present study leads to the examination of its practical components. Among other negative outcomes poverty leads to malnutrition and a limited delivery of services such as health care and schooling.

2.5.2 Malnutrition

As a result of unfavorable economic development and simultaneous population growth, a very large section of the population in Malawi lives in extreme poverty. Poverty in Malawi is a multi-faceted problem, prevalent in rural and urban areas.²³ In order to appreciate the characteristics of poverty, one needs to know that the great majority of Malawians, approximately 90%, live in rural areas and are engaged in subsistence agriculture.²⁴ It is

²² Depending on the source, the Malawian population grows at the rate of 2.9%-3.8% per annum. At present, the country is one of Africa's most densely populated areas with around 87 persons per square kilometre and 171 persons per square kilometre of arable land. Most of the people are concentrated in the Southern parts of the country. The Southern region, containing one-third of the total land area and 39% of arable land, supports almost 50% of the population. (UN in Malawi 1993) It must be noted, however, that the AIDS epidemic has caused a dramatic decrease in population growth. It has been predicted that under the worst scenario, population growth rate will slow down to 2,1 per annum. (UNin Malawi 1993, UNDP 1995). The epidemic, of course, has both human and economic costs that vastly override the population growth effect.

²³ UN in Malawi and GOM (1993) provides a comprehensive assessment of the extent of poverty.

²⁴ Great majority of the rural inhabitants, around 90%, are smallholders whose main income comes from the landholdings. They devote the majority of the land area to the production of food staples, with maize accounting for about 70% of cultivated area. (UN in Malawi and GOM 1993) Most smallholder families are left with plots of land that are too small to support families. About 70% of Malawian subsistence farmers cultivate less than 1.0 hectare and the median area under cultivation is about 0.6 hectares. Additionally, agricultural production is generally very low. Smallholders use hand hoes and other simple implements for cultivation. Production is almost exclusively rain-fed and a single rainy season results in pronounced seasonality. (Mvula and Kakhongwa 1997)

estimated that 60% of the rural population fall under the poverty line²⁵. (UN in Malawi and GOM 1993). The poorest of the poor are female-headed households (Mvula and Kakhongwa 1997).

A key factor in the economic situation of subsistence farmers is scarcity of land, which manifests itself in widespread and serious malnutrition. Even though increased maize production has been one of the top priorities, food output per capita has declined precipitously. The national food self-sufficiency that was achieved in 1973 has not meant food security at the household level.²⁶ (UN in Malawi and GOM 1993, WHO 1993) In an average year more than 50% of rural families run out of food before the next harvest and nearly 60% of Malawians are chronically malnourished. Child malnutrition is particularly widespread (Mvula and Kakhongwa 1997).

Political and policy decisions have greatly undermined food security. The former president Banda strongly emphasized the development of estate agriculture impoverishing the subsistence sector at the same time. Customary land was transferred to the estate owners who tended to concentrate on the production of tea and tobacco for export markets. They were also given the sole right to grow burley tobacco, Malawi's most profitable crop.²⁷ Thus, gross product on the estate sector grew at a rate of 10.4% annually between 1964 and 1986. At the same time, subsistence agriculture grew at a rate slower than the population. Consequently, smallholder contributions to export earnings declined and export revenues became increasingly dependent on estate production. (Harrigan 1991, Pryor 1990, Mvula and Kakhongwa 1997) Along the same lines, the World Bank reforms focused exclusively on increasing export crop production without attempting to achieve the food self-sufficiency objective set by the Malawian government (Harrigan 1991). At the same time debt servicing has consumed a larger and larger share of government expenditure (Kaluwa et al. 1992).

Additionally, President Banda's legacy in Malawi's political, administrative and social structure is clearly pronounced. The system has been criticized for being highly centralized and unable to delegate adequate authority and resources at the local level. Interaction with the villagers and the administration has been very limited. Therefore, the allocation of public spending has not been directed towards the basic social services, including health

²⁵ Poverty line is set at US\$ 40 / adult inhabitant / annum. For a more detailed definition, see UNDP 1997.

²⁶ Following drought conditions, large quantities of maize have been imported at several times, especially in 1979–1980 and 1992–1993 (Harrigan 1991, Chilowa 1998).

²⁷ This colonial pattern of agriculture consisting of estates and subsistence farmers cultivating customary land was broken only in the beginning of 1990s when a small portion of tobacco quotas were allocated to smallholders (Chilowa 1998, Orr 2000).

services and education. (UN in Malawi and GOM 1993, UNDP 1995, Mvula and Kakhongwa 1997)

During the SAPs, in order to reduce the deficit, the government embarked on an expenditure-reducing policy. For a low-income country like Malawi, this policy is bound to adversely impact upon the poor. Government expenditure declined significantly especially in the 1980s. (Kaluwa, et al. 1992) Additionally, distribution of wealth in Malawi is very unequal.²⁸ 95% of the rural population is amongst the poorest 20th percentile income group (World Bank 1996).

2.5.3 Health care delivery

Rapid population growth and lack of financial resources impede health care delivery too. One of the most pressing challenges for Malawi is to find both financial and human resources for health sector. Health care sector in Malawi is primarily organized around the activities of the Ministry of Health (MOH), which has the primary responsibility for developing policies, strategies and programs for health care. Another important agency is The Christian Health Association for Malawi (CHAM), which is made up of religious and other private volunteer agencies. These two together account for about three quarters of total spending on the health sector. One-quarter comes from a variety of local and foreign sources. (Banda and Simukonda 1994, UN in Malawi and GOM 1993) However, these estimates exclude the traditional sector completely.

Unfortunately there is no conclusive information about health care financing that would cover all these agencies.²⁹ There are differing, even opposing, estimates about the level of government expenditure allocated to health care delivery: United Nations' poverty estimation in 1993 argues that the allocation of finances to health in Malawi is low even by African standards. United Nations organizations operating in the country have duly declared that the share is insufficient to cover the operating costs for existing services. (UN in Malawi and GOM 1993). However, in 1996 WHO ended up by suggesting that the Malawian government's spending on health is relatively more than that in the neighboring countries or in countries at the same GNP per capita level. The WHO report expresses

²⁸ Malawi has one of the highest Gini coefficients in the world. The Gini coefficient is a measure of the disparity of income between the wealthiest and the poorest sectors of a country. (Cullinan 2000)

²⁹ It has been estimated that during the 1970s and 1980s, the proportion of total budget allocated to MOH averaged between 5% and 6.8%. In 1991/92, expenditure for MOH was equivalent to 6.0% of the total budget. (UN in Malawi and GOM 1993)

disappointment with the poor performance of the Malawian social sector despite such high public spending. (WHO 1993).

It must be noted that, all in all, public health expenditure per capita is very low in most East African countries, which places a high health care burden on households (Brockhoff and Derose 1996).

In addition to the finances, crucial to the performance of the health sector is the strategy of provision. It is noteworthy that even though MOH is devoted for PHC, a large proportion of health expenditure in Malawi is used for curative care in hospitals (Banda and Simukonda 1994). For example in 1987/1988, curative care swallowed 82% of the finances within MOH preventive care remaining only with 12% of the budget. The three main hospitals alone received 37% of the MOH expenditure. (UN in Malawi and GOM 1993)

Severe shortage of personnel is an additional element that has a direct effect upon the health of lay people. Currently, there is a severe shortage of trained health personnel. Most Malawians are born and die without seeing a doctor. The ratio of one doctor for more than 60 000 people is the lowest in Africa. Medical doctors are concentrated in the major hospitals and administrative positions and Medical Assistants and Clinical Officers function as substitutes in the more remote locations. Their ratio, one per 11 330 people, is also insufficient. Additionally, there is one registered nurse per 12 000 people, one Health Inspector per 75 000 people and one Health Surveillance Assistant per 25 000 people. (UN in Malawi and GOM 1993, WHO 1993) Additionally, it has been estimated that besides biomedically organized health care, there are 18 000 traditional healers and 5000 traditional birth attendants in the country (Banda and Simukonda 1994).

Nevertheless, Malawi has shown rather impressive figures for the health sector. Access to health services is reported to be good, with 80% of the population living within 8 kilometers from a health unit (UN in Malawi and GOM 1993). Another way to look at the distance, however, is to note that 57% of Malawians live more than 5 kilometers away from a health facility (Mwula and Kakhongwa 1997). Additionally, 90% of all pregnant women attend antenatal care at least once during their pregnancies. From the entire population of 12–23 month-old children 86% possess a health card, indicating a high under-five clinic attendance. Practically every child receives a BCG vaccine,³⁰ 90% are immunized against polio, diphtheria, whooping cough and tetanus, and more than 80% are immunized against measles. Oral rehydration therapy (ORT) user rate and presumptive malaria treatment coverage are reported to be high, too. (Malawi DHS 1994)

³⁰ Bacillus Calmette-Guerin (BCG) vaccine provides immunity or protection against tuberculosis (www.who.org).

2.5.4 Education

As discussed earlier, studies from many different countries have shown that mothers' literacy and schooling in particular are closely related to child health and survival (for references, see Sandiford 1995). In Malawi, rapid population growth and lack of resources also hamper the effectiveness of the education system by making it overstretched. Additionally, the share of budgetary resources allocated to education remained relatively low throughout the 1990s. As a result, in the mid-1990s, there was for example a qualified teacher per 131 pupils, 422 pupils per a permanent class room and 31 pupils per desk. (World Bank 1996) Literacy rate for males was 72% and only 42% for women (UN in Malawi and GOM 1993, Unicef 1997).

Despite the recent improvements,³¹ there are still serious problems and severe inequalities in public primary education. In the beginning of the 1990s, standard net enrollment rate was estimated at 53% for the entire nation. However, there were substantial differences between the administrative regions: in the North more than 60% of 6-year-old children started school whereas in Central and Southern regions the percentage was only about 30. (Malawi DHS 1994)

Importantly, gender disparities in gross enrollment rates for primary education were considerably higher in the South than in the North or Central regions: boys in the rural South have an overall gross enrollment rate about 25% higher than the rate for girls. In the North and in the Central regions the gross rates are about the same for both sexes. Once examined on individual level, poorest girls are least likely to go to school. (World Bank 1996)

2.6 Concluding comments: global trends, local context

In the previous chapters, I have examined some contextual issues relating to child health-seeking. The basic idea was to consider the relationship between global trends in health, disease and health sector financing, and the local context in Malawi within which these global trends have been expressed and managed. A contextualised approach to public health is by no means new. Initially public health related environmental conditions to disease outcomes. For example, John Snow was able to show in his famous study that cases

³¹ Malawi introduced Free Primary Education in 1994 / 95 which resulted in enrolments rising by nearly 50% (Swainson 2000).

of cholera were associated with degree the of water pollution (Coreil et al. 2001). By introducing context, researchers usually hope to move away from the view that health status is purely a result of individual choice (Frolich et al. 2001). In recent years, many areas of social science research have been increasingly concerned with tracing the connections between individuals and the contextual settings in which they lead their lives (Duncan et al. 1998).

My argument here is that there is no set definition for what the context should consist of. As I described in the introductory chapter, I chose the contextual elements of the present study based on my personal experiences of the health care system in Lungwena. Later on, literature on child health in developing countries offered confirmation that information on diseases and mortality trends as well as macroeconomic perspective are relevant, although in different ways. A high incidence of diseases and mortality are commonly understood to be a consequence of unfavorable cultural, social or biomedical interactions. Quite the opposite, macroeconomic development is commonly seen as a cause for poor child health. In some research reports, the direction of causality is questioned and the relationship between child morbidity, mortality and economics is described as interrelated.

A great majority of children in the developing countries are underprivileged in several ways and there are many aspects in these societies that are critical to child health. Accordingly, children's health status is low. To sum up the above perspectives, one may say that high child mortality rates in developing countries are an outcome of a few diseases. Despite massive international and national programs to promote child health, most developing countries continue to struggle with persistently high child mortality rates. Literature indicates that the general decline has stagnated during the past two to three decades. Earlier, when the downward trend in mortality was a worldwide phenomenon, less interest was shown in critically defining the specific factors responsible for it. (Ahmad et al. 2000)

A discussion of current approaches to childhood mortality would not be complete without mentioning the role of macroeconomic indicators. Global power relations materialize in the form of economic policies, which determine the availability of health services and financing of the services. Additionally, international economic policies structure societies at levels that have an indirect impact on health. Important sectors include for example food supply and education. The difficult and often disastrous situation facing many developing countries has serious consequences for the population, especially for children. (Helleiner and Jolly 1991)

Malawian children are amongst the unluckiest ones: when measured by mortality rate, Malawi is a country with exceptionally high child mortality. Ordinary diseases offer a

biomedical explanation for the adverse situation. The profiles of the most common diseases observed in children in Malawi constitute a severe health risk but they would be treatable by modern health measures. In a very general sense widespread poverty explains the grim status of child health in Malawi. Amongst its other repercussions, poverty leads to malnutrition, lack of medical care and a lack of education which all have repercussions on child mortality patterns that are typical for Malawi as well as other developing countries. However, there is an obvious need for further research that would identify new factors that contribute to the deterioration of child health beyond the currently known factors discussed above. For instance, the factors which contribute to child fatality from common diseases are of particular interest.

By selecting the above perspectives, I have set a frame within which the reading of previous studies and analysis of the field material will take place. Needless to say, besides those factors that I have examined above, several other perspectives on child health would be viable. Alternative viewpoints to child health-seeking could be obtained from, for example, behavioral and cognitive neuroscience, psychiatry or social psychology. (For further approaches, see International Encyclopedia of the Social and Behavioral Sciences 2001)

3 ANALYTICAL APPROACHES TO CHILD HEALTH AND BEHAVIOR

The aim of this chapter is to provide tools for analyzing child health-seeking within the context that I constructed in the previous chapter. By virtue of the very nature of child health, it offers a meeting point for different disciplines, approaches and foci. Additionally, child health-seeking forms an interface connecting biological and social components of health. Therefore, the first section of this chapter (3.1) is devoted to systematizing child health research that has been conducted in the developing countries.

The second section (3.2) outlines a broad picture of health behavior research. The line of reasoning behind this is that child health-seeking can be considered a sub-field for health behavior research. In an analytical sense a study of child health-seeking can benefit from the use of health behaviors as an umbrella field. If examination were to be confined to child health-seeking only, general development of the field would remain uncovered.

Finally, the third section (3.3) addresses common definitions and distinctions that have been used in health behavior studies. The aim of this examination is to offer practical tools for assessing child health-seeking in literature and in empirical material.

3.1 Child health research scenery: diversity of perspectives

One can generally state that, in any research, findings are closely related to the framework and research approach that is employed. Theory that is applied guides what is seen and how the results are interpreted. (Benston 1989, Young 1981) Using this notion as a starting point, the section below explores child health research scenery. The focus is on developing countries.

Despite the massive volume of diversified research that the concern about poor child health has produced, ways to improve the matter remain the subject of lively debate. Similarly, causes for the observed mortality decline in the industrial countries and in some of the developing countries are not well understood, neither theoretically nor empirically. As Jacques Vallin (1992) has emphasized, there are several *theories* of mortality decline. Therefore, it is not totally unproblematic to aggregate literature into different categories by the approach that has been used. Many of the studies do not neatly fit into any given groups and categories tend to be overlapping. Additionally, research projects make use of many

types of data and are guided by several research paradigms. Thus, the below categories are ideal types and are used as analytical tools highlighting important distinctions and developments within the field.

An apt categorization of the field for the present purposes is to divide child health research conducted in developing countries into three broad strands that are discrete theoretically and methodologically:

- The first strand of research supports the primacy of biomedical public health measures and modern health technology.
- The second strand emphasizes a broader context including economic growth, improved living standards and increased access to nutrition.³²
- The third and most recent strand has arisen from the attempted fusion of the two earlier approaches. This strand emphasizes the importance of understanding both medical factors and the context.³³

Categories one and two depict the classic debate over the causes of mortality decline not only in the developing countries but also earlier in Europe and in the USA. This is a dispute not yet settled. (McKeow 1971, Caldwell 1979, Murray and Chen 1993) The third and most recent category has emerged from attempts to overcome this dualism. Below, I will outline the main constituents of the first two strands and focus on the third one because it has direct implications for the present research.

3.1.1 Biomedical approach to child health

"The story of child health in developing countries is one of needless illnesses, preventable disabilities and of missed opportunities." (Ramalingaswami 1986)

The word biomedicine refers to a medical paradigm that is dominant in European and North American societies. Each of its denominations, Western, cosmopolitan, modern, scientific, as well as allopathic captures one of its characteristics while disguising others (Hahn 1983). Interesting, and perhaps revealing, is the fact that medical scientists themselves have assessed biomedical research and findings mainly with concepts immediately related to clinical practices, for example, validity and reliability. It is mainly sociologists and

³² Vallin (1992) has collected the central evidence in support of the two approaches.

³³ Mosley (1984), Caldwell (1986), The Cebu Study Team (1991), Vallin (1992), Murray and Chen (1993), Mammo (1993) have a similar three-category classification in their texts.

anthropologists who have critically examined biomedical practices and paradigm in larger terms. In these studies, biomedicine is examined as a cultural product, which draws on the dominant Western philosophical traditions. The epistemological origins of the field lie in the Enlightenment era and later, in positivism. (Hepburn 1988, Gordon 1988, Lewis 1993, Good 1994, Muller 1994, Nettleton 1995, Rhodes 1996)

Deborah R. Gordon (1988) discusses the primary source of biomedicine as a scientific paradigm in terms of naturalism. Naturalism is founded on the principle that nature is a physical matter obeying natural mechanistic laws and is thus orderly and predictable. Accordingly, biomedicine is based on technological and scientific advances made especially in biological sciences and in medicine. Therefore, biomedicine claims objectivity and depiction of empirical biological reality: facts that are counted as knowledge are basically derived from observation and measurement. Correspondingly, it is assumed that a biological phenomenon is a mechanism independent of, for example society, culture, religion and morality. Additionally, biomedicine not only obtains its constituents from Western culture but it also reflects characteristics of the culture, which it is a part of. An integral part of the Western worldview is individualism. (Hepburn 1988)

Consequently, biomedicine typically focuses on individual patients: disease happens to the bodies of individuals. Disease is a physical malfunction of the body. Health and disease are observed mainly through specific organs and tissues of the body. Organs and tissues are the main target of a medical intervention. (Carrier 1989, Stambolovic 1996)

Besides theory, biomedicine is also an institution: from the middle of the nineteenth century onwards, healing in Europe and North America changed to a profession with a considerable amount of power, status and authority (Williams and Calnan 1996). Because of the practical aspect, however, the paradigm should not be considered as homogenous or consistent. It has been shown that there is really no uniform biomedicine. Rather, there are enormous variations in how biomedicine is practiced in different parts of the globe. (Helman 1997)

Where does the above discussion leave us with respect to child health research in developing countries? The biomedical analysis of the situation of children is inevitably restricted to factors that fit the research approach. Therefore, studies attempt to isolate distinct and identifiable diseases, which are causally produced by some underlying conditions, which can be isolated, verified and monitored. Therefore, reasoning about causation of diseases has largely been very straightforward: poor health is caused by pathogens, such as environmental contamination or dietary intake. The aim has been to find a fairly small set of etiological causes for each child health problem. Where such disease entity exists, biomedicine is on ground where it has considerable expertise. (Gillett 1994)

Theory building within biomedical research has largely been limited to the examination of biological conformities and meta-analyses. Socio-economic and cultural determinants of illnesses are usually analyzed as background variables, which are considered to be beyond the scope of research and medical interventions. (Mosley 1984) Additionally, researchers often implicitly assume that people in developing countries have an understanding of the biomedical system of knowledge (Hepburn 1988, Gordon 1988).

Researchers as well as policy makers have become aware of the limitations of a strictly biomedical approach. Today, no one would attempt to explain the improvement of child survival purely in terms of biomedical progress. Indeed, the biomedical approach is discredited for overlooking interactions that take place within a society, that is to say, the context. An example of this line of criticism comes from Mosley (1984) who asserts: it is biologically correct but not very useful to say that pregnancies are the cause of (high) birth rates.

Because of critique, in child health projects efforts have been made to incorporate disease control programs into more integrated and manageable packages of basic services. The strategy involves not only curative care but also includes interventions to promote healthy growth and development as well as prevention of diseases. Interventions are often aimed at more than one disease. (Tulloch 1999, Claeson and Waldman 2000). Along these lines, WHO and Unicef jointly developed the strategy for integrated management of childhood illnesses (IMCI) in the mid-1990s. Besides biomedical preventive and curative components, the IMCI strategy also encompasses behavior within families and communities and at health facilities. (Tulloch 1999, Ahmad et al. 2000)

3.1.2 The social sciences approach to child health

By definition, social science studies concentrate on aspects of child health other than biomedical. Marc Augé has caught the essence of social scientific approaches in stating that there is no society where sickness doesn't have a social dimension (Augé 1985). This kind of thinking has a number of implications for research plans. Most importantly, causation of health problems is seen as a part of a more extensive setting. The contribution of social scientists (in which I include also economists) has been to bring the social, cultural, political and economic environment into the research agenda, not only as background factors but also as independent variables.

Even though biomedical research has been dominating the child health scenario it has been admitted for some decades now that there is a complex web of factors operating

behind the biological causes of child mortality. Currently, a background assumption in child health research is that good health is linked to many conditions of a society. It is commonly accepted that mortality levels and trends are strongly influenced by socio-economic and political decisions. (Mosley 1984, Vallin 1992)

Notwithstanding the interesting findings offered by social scientists, theoretical advancement of the field has been limited. As Giovanni Andrea Cornia (1984) wrote: "Few are the general conclusions that can be drawn after surveying the above literature (literature on socio-economic determinants of child welfare) and it would be pretentious to try to conclude by establishing which factors are the most important for achievement of higher levels of child welfare. Indeed, the lack of a theory pertaining to the socio-economic determinants of mortality is clearly shown in the literature by the lack of agreement on what factors should be included in the analysis." After almost two decades, this statement is more accurate and actual than ever.

Despite the search for a more comprehensive framework, social science research on child health in developing countries has been distinctively atheoretical. Correlation studies have, of course, pointed out certain established micro- and macro-level associations between various factors and child mortality. Anthropology, on the other hand, has shown the large diversity in health related habits and ways of thinking. However, the manner in which these variables affect child health and the way they are interconnected are left unexplored and unexplained "black box". Research has not been able to capture the actual processes that lead to mortality nor does it give guidance to practical health programs. Conclusions tend to be sweeping such as "when income and educational status are higher, health is better". (Mosley and Chen 1984, Cebu Study Team 1991, Gursoy-Tezcan 1992) Anthropology in particular has been blamed for overlooking the biological and concrete symptoms of childhood health problems. The focus has been on symbol systems, beliefs and meanings rather than on action and behavior. (Fabrega and Nutini 1993, Bolton 1995)

3.1.3 Overcoming the divide: integrated approaches

It is obvious from the above that neither biomedical nor social science approach alone is sufficient for examining such a complex matter as child health. The failure to identify the causal pathways linking child mortality and its determinants has revealed the need to identify new models of poor child health. Additionally, concern about stagnating figures or even a reverse trend seen in child mortality (see chapter 2.2), has prompted research into the nature, pattern and determinants of mortality decline.

Attempts to advance the field theoretically and to overcome the split between different approaches have emerged from several directions. As early as in 1958, Fleck and Ianni suggested that the concept of “multiple causation of diseases” might serve as a common meeting point for biomedicine and social sciences (see Nations 1986). The so-called ecological approach started emerging both in anthropology and in epidemiology during the late 1960s and early 1970s. During this time the structural factors of health systems became the focus of research. The interrelationship with local social, political and economic composition was brought into the study agenda. Ecological models stressed the idea of a causal web: a multiple and interrelated chain of causal factors behind poor child health. (Dunn and Janes 1986) During the 1990s, there were an increasing number of collaborative projects between anthropologists and epidemiologists. This further led to recognition of the need for an integrated approach. (Yach 1992)

Two interesting examples of projects that aimed at bringing together factors from biomedical research and social sciences are the *proximate determinants framework* and the *health transition project*.³⁴

The proximate determinants framework

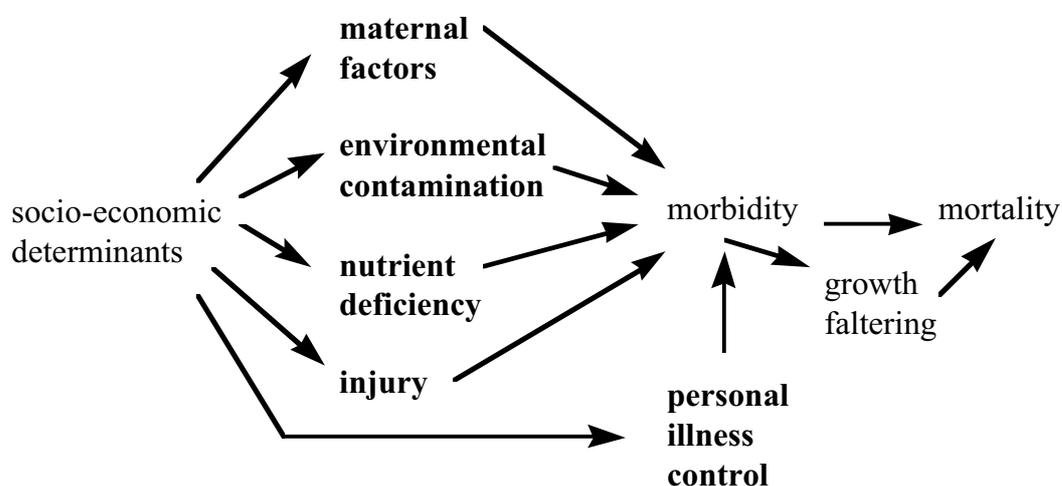
A principal stimulus for methodological development in child health research has been W. Henry Mosley's and Lincoln C. Chen's proximate determinants framework (M & C framework) that was published in 1984 (Mosley and Chen 1984). It implicitly attempted to fill the gap between a social science approach and a biomedical approach and in this manner advance theory building. The authors themselves (Mosley and Becker 1991, Murray and Chen 1993) and several other researchers (DaVanzo 1984, Tsui et al. 1988, Das Gupta 1990, Tekce 1990, Ahonsi 1992) have later modified and developed the framework. The underlying theme, however, has remained the same through different versions (Sai and Nassim 1991, Vallin 1992).

The M & C framework is pictured in graph 3 below as it was presented by Tsui et al. (1988). The starting point of the framework is that the dichotomy between social sciences and biomedicine is a false one; the aim is to emphasize the social as well as the medical

³⁴ Along different lines there have been several additional theoretical attempts to solve the child survival puzzle. Examples are DaVanzo et al. (1983) who assessed the impact of biological and behavioral influences and Millard's (1994) three tier causal model for child mortality in which she differentiates between immediate medical conditions (proximate causes), behavior (intermediate cause) and economic, social and cultural processes (ultimate tier).

roots of child mortality. The framework is based on the premise that all social and economic determinants of child mortality necessarily operate through a common set of biological mechanisms, which the authors call proximate determinants,³⁵ thus the name. These mechanisms are grouped into five categories that are highlighted in bold typesetting in the graph:

1. nutrients deficiency (calories, proteins, micronutrients)
2. environmental contamination (air, food, water, fingers, skin, soil, inanimate objects, insect vectors)
3. injury (accidental, intentional)
4. maternal factors (age, parity, birth interval)
5. personal illness control (personal preventive measures, medical treatment)



Graph 3. Proximate determinants framework by Mosley and Chen.

Source: Tsui et al. (1988)

The graph indicates that a large variety of factors may be associated with child survival. Additionally, these factors operate on various levels of society. The proximate determinants framework points out that even though the ultimate causes of death are biological, a chain of socio-economic factors precedes a death. As I explained in chapter 2.2, the malnutrition / infection dyad is considered as the principal biomedical cause for children's high mortality in developing countries. But, because children in these countries often suffer multiple disease condition simultaneously there is general frailty and a

³⁵ The terms proximate determinants, intermediate variables, and mechanisms are used interchangeably.

competing risk caused by several diseases. Therefore, the M & C model argues that child mortality should be studied more as a chronic condition process with multifactorial origins, not as an acute, single-cause phenomenon. (Mosley and Becker 1991)

The advantage of the M & C framework is that, in a relatively simple way, it combines the biomedical mechanism and the role that is played by five proximate determinates that directly influence the risk of child morbidity and mortality. A recent adaptation to the model made by the World Bank adjoins an additional dimension to the M & C model: in addition to showing the relationships between the social and biological variables, the renewed model includes the more distal role of government policies and action. (Claeson and Waldman 2000)

The health transition project

The health transition project (HTP) has been another attempt to advance the child health field theoretically.³⁶ It was officially launched in 1987, at Harvard University and sponsored by the Rockefeller Foundation. In the beginning of the 1980s there was a series of three important workshops organized by the project. A journal by the same name was published between 1991–1997. The chief editor of the journal and a major actor within the project has been John Caldwell. He has worked on the themes of child survival for a longer time (Caldwell 1979, 1986). The project attracted a large group of prominent researchers (see Caldwell et al. 1990). Interestingly, W. Henry Mosley and Lincoln C. Chen, key figures of the above described M & C framework, have also been active in this project, too (Chen 1992, Mosley 1992).

The basic idea behind the HTP is the notion that health interventions are fundamentally behavioral interventions facilitated by medical technology. At the present time there is the necessary biomedical technology to drive child mortality rates down in developing countries – in the industrial countries this has already happened. Therefore, research related to medical techniques was explicitly ruled out of the project. Furthermore, within the HTP it is considered that medical interventions alone cannot produce further dramatic declines in mortality without change in other aspects of a society. Therefore,

³⁶ The basic theory of epidemiological transition was formulated already in the 1970s (Janes 1999). The term health transition was first suggested by Caldwell et al. to encompass the theories of demographic and epidemiological transition and to further join social and cultural variables in the model (see What we know about health transition 1990).

research conducted within the project focuses on changes in social and cultural norms and individual behavior that result in better health. (Mosley 1992, Findley 1992)

Most importantly, the idea of health transition changes the focus from a concern with vital statistics to a consideration of the nature of social, cultural and behavioral factors that underlie the transition (Janes 1999). Research projects guided by the integrated approach emphasize the parallel significance of modern health services and the socio-economic and political context. According to these studies, the greatest success over child mortality is a product of an interaction between certain cultural and social characteristics on the one hand and easy accessibility of basic modern health services on the other. (Caldwell 1990)

The main critique that has been aimed towards multicausal models concerns the fact that they fail to come to grips with the issue of the significance of various components. In other words the models do not take into account whether certain factors play a more predominant role in child survival. (Baer 1996)

3.2 Health behavior research

The previous section described the array of research approaches to child health in developing countries. The examination showed that the more recent integrated approaches consider health related behavior as a major factor effecting children's health status. The concept of health behavior, however, has a longer history in public health research than the models discussed above suggest. Therefore, the aim of this chapter is to offer a selective summary of major theoretical turning points in the field.

The majority of the body of literature covering health behavior is derived from studies in the industrialized countries, in European or North American settings, although written in an (irritatingly) universal tone³⁷. Therefore, the first section below reviews research themes more generally, whereas the second section covers health behavior research in the developing countries.

³⁷ For an example of criticism of medical sociology as being “parochial” and “ethnocentric”, see Conrad and Gallagher (1993).

3.2.1 General discourse: from disease to health

The study of health related behavior constitutes a prominent component of public health literature. It makes such a demanding area for assessment because it does not form a distinct domain but is located at the crossroads of diverse research traditions. Both scientists and policy makers have debated the key factors affecting lay people's health related choices and the ways to change people's behavior. Robert Anderson (1988) adds also commercial interests and the related literature into the list. Similarly, health behavior studies also “mesh” the established academic disciplines. Although terminology is not firmly established, health behavior³⁸ is usually considered as an umbrella term embracing a larger field of research and sub-sectors. (McQueen 1988, Ware et al. 1992, Nettleton 1995)

Early perspectives

The very first references to health behavior as a research concept are from the beginning of the 1950s.³⁹ At those times, health behavior was defined as “any activity undertaken by a person believing *himself* (sic!) to be healthy for the purpose of preventing disease or detecting it at an asymptomatic stage” (Kasl and Cobb 1966; cf. Anderson 1988). Emerging from these early studies is the basic distinction between health behavior, illness behavior and sick-role behavior (Anderson 1988).

During the early period, from the 1950s to the 1970s, there were two dominant perspectives that were utilized in health behavior research. First, there was the biomedical view in which concepts and topics of interest were derived from a biological disease model. Emphasis was on a narrow range of behaviors, principally smoking, drinking, diet and exercise. Scholars within social psychology and health education constructed the second view to health related behavior. In these studies, human behavior was viewed in the light of fixed personality traits or pre-programmed psychological mechanisms, permanent and unchanging. Within both of these perspectives, focus was upon individuals and behavior

³⁸ Inadequate specification of the concepts has led to the interchangeable use of terms such as health habits, health practices and health behavior (Anderson 1988). In the present research, I use health behavior and health-related behavior as synonyms.

³⁹ The earliest health behavior studies that are usually referred to are Zborowski, M: Cultural Components in response to pain from the year 1952 and seminal articles by Kasl and Cobb from the year 1966. For further analysis and bibliographical information about the early works, see Nettleton 1995. Anderson (1988) summarizes the historical origins of the field.

was regarded as a matter of free choice and individual responsibility. People were seen as rational value-maximizing actors who exploit limited resources to their best knowledge. (Anderson 1988, Duncan et al. 1996)

Research was predominantly influenced by the concern of health professionals. Most of the studies focused on the use of preventive health services and factors influencing this. Scholars were interested in topics such as under-utilization and over-utilization of services and the fact that patients did not comply with medical advice and instructions. (Dean 1986, Anderson 1988, Nettleton 1995)

Criticisms and response

It appears that the period from the mid-1970s to the early 1980s was a watershed in health behavior research. At that time, severe criticism had accumulated on earlier conventions. The critics argued that, in previous studies, the basic interpretation of people as automata rather than complex, reflective agents was incorrect. At the same time, a wide range of cross-national studies of medical choice as well as the shift to greater societal burden of chronic illness generated uneasiness with an individual, rationally-focused perspective. According to the critics, an approach focusing on individuals resulted in blaming the victim and an attribution of guilt. Furthermore, it was pointed out that in the early studies individual behavior was entirely divorced from its social context and structural constraints. (Dowie 1975, Pescosolido 1992, Duncan et al. 1996) However, in later studies it was found that people's responses to symptoms were contingent upon their cultural context and that decisions to seek professional help were mediated by social factors. Consequently, from the 1970s onwards, the focus of health behavior research shifted from the individual to context (see Nettleton 1995 for references of studies conducted in industrialized countries).

Based on this criticism, health behavior research took a new course. While early health behavior studies were actually more preoccupied with diseases, the focus of more recent studies has been implicitly on health. Since mid-1970s, policy documents have emphasized the need to promote good health rather than to treat illness or disease. Additionally, the concept of health behavior developed towards activities relating to the maintenance of health. Lifestyle has been cited in health care planning and strategies to alter human behavior as a means of changing health status have received increasing attention. (Weiss, 1992, Nettleton 1995, Duncan et al. 1996)

The omission of lay or self-defined health behavior in the early studies was challenged by investigating a range of self-defined behaviors which Harris and Guten

labeled “health protective behavior” defined as “any behavior performed by a person regardless of his or her perceived health status, in order to protect, promote or maintain his or her health, whether or not such behavior is objectively effective towards that end”. (Harris and Guten 1979; cf Anderson 1988)

Recent development

An attempt to provide an improved conceptualization of health related behavior has been a major concern in the “New Public Health” and in health promotion. The underlying rationale of these movements is that they have adopted a broader socio-structural approach than the one that was utilized earlier. (Nettleton 1995, Duncan et al. 1996)

Typical for more recent research on health behavior is the great variety of foci and approaches. While new ideas have taken ground the old ones have, to some extent, secured their position. Presently, three sub-groups of health related behavior are usually distinguished:

- health-enhancing behavior,
- health-maintaining behavior, and
- health-damaging behavior (Karvonen 1997).

During recent years criticism has started accumulating on the reformulated health promotion and The New Public Health as well. Research has been accused of increasing general intolerance against those who act against the dominant health norms. Documents have also been analyzed from the point of view of the power structure. It has been observed that public health cannot be seen only as a concern about health, but it is also about the exercise of a particular form of power. (Petersen and Lupton 1996) I will not enter into a more detailed discussion of this debate because, as it will be seen later, these latest turns of discussion have not yet had an impact on research that is conducted in developing countries.

Finally, health behavior related to children has attracted relatively little research interest as compared to, for instance, adolescent health behavior. In the textbooks, children's or their guardians' health behavior is not discussed as an independent methodological or empirical issue. There are, however, a number of studies related to the theme. Firstly, a limited number of research reports examine the utilization of the formal health care system by children (for example Janicke et al. 2001). Also Salminen (1997) has

examined the factors that make pediatric patients to seek care at a university hospital.⁴⁰ Additionally, there are studies that look at health behaviors including all other responses and care measures in addition to professional care (for example Leiser et al. 1996, Curry et al. 2002).

3.2.2 Discourse concerning developing countries: a focus on diseases and technology⁴¹

Studies of health related behaviors have provided a fruitful place to reflect on how people in different contexts make sense of negative bodily sensations and respond to adversity. To some extent, studies that are concerned with the child health domain in the developing countries utilize the same discourse as those confined to industrialized countries. A quick perusal of the literature, however, reveals that studies on health related behavior in developing countries have historically followed a considerably different path.

Historical background

African infant and child care customs have been described in the anthropological literature since the middle of the nineteenth century. The earliest observers were protestant missionaries who worked among Bantu peoples in Southern Africa. Their published accounts were not focused on childhood but nevertheless included descriptions of child care

⁴⁰ Salminen TK (1997): *Sairaan lapsen hoitoon hakeutuminen* (Health care seeking of a sick child), an unpublished Pro Gradu thesis at University of Tampere, School of Public Health.

⁴¹ In this section, I draw substantially from various works, yet, none of which considers health behavior related research in the developing countries in a comprehensive manner. Firstly, there is an annotated bibliography entitled *Health care seeking in developing countries*. It is reasonably up-to-date, collected by Tipping and Segal (1995). The authors have thoughtfully reviewed 114 articles and monographs. Unfortunately for the present research, theoretical contributions from medical anthropology and psychology are absent and the scope is restricted to the illness perspective. Moreover, the bibliography is time wise confined to material published in 1984 and after (see Ogden 1997, for a book review). Additionally, there are a few review articles and methodological articles that tend to look at health seeking behavior from the point of view of one academic discipline or method. Coreil (1990) suggests that this is particularly the case especially with reviews of medical anthropology published since the 1980s because the field has grown considerably and become more specialized. James Young's study *Non-use of physicians: methodological approaches, policy implications, and the utility of decision models* exemplifies this. Despite the comprehensive title, it considers only ethnographic approaches to health care choices. In addition to the books and articles, I checked selected databases (Sociofile, Ideal, PopLine and Medline) for references about health behavior and illness behavior in developing countries.

customs. In these documents, the great frequency of childhood deaths was reported. (LeVine et al. 1996)

Also early community health projects in developing countries at the end of the nineteenth century paid attention to peoples' health related behaviors (for examples, see Yach 1992). These projects operated prior to the formal establishment of distinct academic disciplines such as anthropology, sociology or epidemiology and collected and analyzed various kinds of data. Typically, the projects emphasized the use of a combination of (what nowadays is called) qualitative and quantitative methods. On the one hand, such projects worked with mortality rates thus utilizing the core terminology of epidemiology, and on the other hand, standard anthropological methods were utilized.⁴² (Trostle 1986, Yach 1992)

The first anthropologists worked in the colonial countries in the 1920s and 1930s. They were not specialists but considered explanations for health and illness in the context of general studies on beliefs, understanding and practices of cultural groups. Typically, they conducted small-scale intensive studies on particular tribes who were looked upon as "primitive". Ideas of magic and religion, which were central in these studies, were also utilized for explaining health related issues (for more references, see Stainton Rogers 1991). Subsequent critics have pointed out that the early anthropologists found it difficult to tell where magic ended and medicine began. Their studies focused on moral and spiritual causes and cures and tended to disregard the physical or natural elements presenting the medical practices as less natural than they really were (for more references, see Carrier 1989). David Nyamwaya (1987) has noted that studies were based on two assumptions: firstly, Western therapy is resisted because of "cognitive dissonance" and secondly, the relationship between the local and Western medical systems is inevitably one of conflict.

In recent years, there has been a resurgence of interest in understanding how people in developing countries go about getting health care. Although the topic itself is not new, recent changes in the public health landscape have given it renewed urgency. The widespread adoption of primary health care in the developing countries beginning in the 1970s (see chapter 2.3) spurred a new interest in the role of cultural and behavioral factors in health care. After all, in addition to the medical aspects, PHC sought to introduce changes in the behavior of people. (Stone 1992) It has also been suggested that the current concern related to health behavior is due to the awareness of the importance of the timely and effective treatment of infectious diseases in particular (Ogden 1997).

⁴² It was only with the development of laboratory disciplines, bacteriology and virology during the last decades of the nineteenth century and the beginning of the next century that interest was redirected towards what nowadays is called biomedicine (Yach 1992).

Study approaches

It is overwhelmingly anthropologists, epidemiologists and physicians who are writing on child health issues in the developing countries. When it comes to health behavior, at the risk of oversimplification, the spectrum of current study interests may be categorized into two broad fields:⁴³

- ethnographic pathway models which, describe the process and different steps in decision making, and
- epidemiological determinant models within the epidemiological tradition, which look at the end point of health care seeking.⁴⁴

Thus, at the level of academic fields, health behavior research parallels with the different but complementary traditions of anthropology and epidemiology.⁴⁵

The ethnographic tradition aims at a detailed understanding of illness labeling and the health seeking process. The mainstay of this field is anthropological studies but there are also a limited number of sociologists working in the developing countries.⁴⁶ The anthropological perspective on health places the entire process of illness definition and help seeking within a cultural context through which decisions concerning health and illness are made by individuals and groups. Anthropologists have, for example, examined the nature of health beliefs, the meanings of health and the interpretations and evaluations of behaviors that characterize different cultural and social groups. Additionally, anthropologists have shown great cross-cultural and intra-cultural variation in the ways

⁴³ Modified from Kroeger (1983), Angel and Thoits (1987), Anderson (1988), Ryan (1998), Tipping and Segal (1995). By contrast to the industrialized countries, social-psychologists have not usually been directly involved in research projects in developing countries. However, explanatory models (EMs) proposed by Arthur Kleinman have been widely applied in medical anthropological research. EMs assume that people carry essentially static mental templates that provide a pattern for action. (Hunt et al. 1989)

⁴⁴ Ryan (1998) has used the terms synchronic (use or non-use of particular treatment) and diachronic (the order in which treatments are administered) to refer to the same categories.

⁴⁵ There are, of course, also significant differences between anthropology and epidemiology, especially when it comes to the scope of research and methods. However, the major difference is in measurement. Forms of quantification are integral to epidemiological knowledge. It is argued that in epidemiology, there are two central processes that are part of constructing quantifications: what should be counted and how should it be counted? Anthropology, on the other hand, has primarily developed as a qualitative enterprise. (Dunn and Janes 1986, Petersen and Lupton 1996). However, I do not wish to enter into the quantitative / qualitative dispute here.

⁴⁶ Sociology customarily identifies socio-cultural variables (e.g. education, ethnicity, gender, social class, family relations and economy) as important factors that influence the identification and response to illness. However, research belonging to the field of medical sociology dealing with developing countries is more rare than anthropological studies. (Conrad and Callagher 1993 and Morrison, Ager et al. 1999).

people identify health problems. By doing this, anthropologists have contributed to the understanding of the process by which a biological disease becomes an episode of sickness (Frankenberg 1980). Besides magical elements, anthropologists have more recently reported the symptomatic treatment of illnesses (see for example Reynolds-Whyte 1997, I will come back to this matter in the next chapter).

The epidemiological tradition employs conventional epidemiological methods to study the incidence and prevalence of diseases in different populations. It seeks to understand the etiology, progress and consequences of diseases. Along its history, epidemiologically oriented health behavior research has put the emphasis on various factors, for example economic situation, family structure and age and marriage patterns. Earlier, study designs simply sought associations between or correlations with independent variables and child mortality. Methodological development along with advancement in data processing opportunities led to multivariate methods from the 1960s onwards. In developing countries epidemiological studies on risk factors and protective factors have primarily focused on the prevention and control of diseases. Human behavior has often been incorporated as a variable in epidemiological studies. Usually it is considered as a predisposing or risk-enhancing factor between host and disease. (Trostle and Sommerfeld 1996)

The main difference between anthropology and epidemiology in their orientation to health behavior is that, more than anthropology, epidemiology, is directed towards the study of disease instead of illness. Until recently, there has been little collaboration between the “illness approach” and the “disease approach” which depicts the uneasy relationship between culture and biology and physical symptoms. In recent years, however, there have been efforts for greater partnership between these approaches. The mid 1990s found unprecedented numbers of medical anthropologists engaged in health research in an interdisciplinary context. They have increasingly adopted standard data collection methods from demography and epidemiology. (Yach 1992, Yoder 1997) Similarly, epidemiologists have expressed their interest in an interdisciplinary approach in health research (Trostle 1986).

Also health behavior research concerning the developing countries has been transformed through critique. As I explained above, medical anthropologists have been blamed for being mainly interested in issues of meaning and in the symbolic and epistemological dimensions of illness and healing. The weight of empirical evidence, however, suggests that regardless of cultural beliefs, people are willing, and sometimes eager, to use modern pharmaceuticals and other elements of Western medical practices without giving up local (traditional) explanations of illness. As a response to critique, most

medical anthropologists have considerably modified their assumptions concerning the effects of peoples' belief systems on their health care behaviors. More recently, they have emphasized a broader set of elements including environment and economic and political factors in addition to the cultural belief system. Additionally, while in the earlier formulations about "cultural belief systems" people were seen as passive actors within traditional culture the more recent perspective sees them as active decision makers, selecting and deciding from a series of health care alternatives. (for more references see Browner et al. 1988, Pelto and Pelto 1997)

Notwithstanding the recent changes in the study approaches, research on African therapeutics has for several decades been predominantly orientated towards poor health instead of good health. It has been the implicit tradition to construct health as a negation of illness, disease and death. This founding assumption has remained as a tenacious backdrop in research plans. Thus, a more appropriate term than health behavior research would be disease behavior research.

Anthropologists have traditionally studied people's behavior as a response to symptoms, illness experience and the cultural meaning and social relationship experienced by the patient (Janzen 1981, Inhorn 1995). Applied anthropological studies have focused on disease and on improving interventions and education as a means to achieving disease specific ends (Nichter and Kendall 1991). Studies conducted by behavioral epidemiologists and physicians have derived their theoretical assumptions from biomedicine and biology. They have studied patterns of morbidity and mortality of various groups, which may be associated with particular behavior and the prevention and cure of diseases. (Heggenhougen and Shore 1986)

Another feature persistent in the health-behavior studies is the trust in the superiority of modern biomedicine. Until fairly recently, it was generally believed that much of the global improvements in health were the result of specific medical interventions. This has led to the emphasis of biomedical health care technology. With the exception of a few anthropological studies, the major focus of research has been on the appropriate and correct utilization of biomedically organized health services. (Kroegeer 1983, Coreil 1991, Berman et al. 1994, Tipping and Segal 1995, Ehiri and Prowse 1999)

Up to now, research on preventive health behavior in developing countries has been very limited. Moreover, a naïve model of behavior dominates: it is assumed that behavior change is a direct result of changing knowledge or attitudes (Morrison et al. 1999). Research has been focused on the standard *Knowledge, Attitudes, and Practices* (KAP) survey, providing quantifiable, demographic data and behavioral indexes amenable to statistical analysis (Coreil et al. 2001).

While assessing international health projects more generally, Stanley Yoder (1997) had noted that models of behavioral change that are drawn from social psychology are implicit in many, if not most PHC projects. They are attractive for a number of reasons, including, the following: they claim the ability to predict behavior from cognitive elements and they offer ways to intervene through health education. Additionally, this perspective places the burden of maintaining good health on the actions of individuals rather than the social, political, or ecological environment.

3.3 Toolkit for analyzing child health-seeking

While the previous sections assessed research approaches to child health (3.1) and health related behavior (3.2), this chapter aims at going one step further towards practical analysis. Below, I will provide tools for facilitating assessment of previous literature and fieldwork materials. Because there was no suitable ready-made toolkit available, I have selected the set of concepts from the previous literature based on my own judgement.

Perspectives to health problems

A useful place to begin gathering tools for assessing child health-seeking is to distinguish between key viewpoints to health problems. Following social science convention, there are three perspectives that are based on very different premises, employ a different system of verifying findings and look at the treatment in a different way.

1. Disease is a concept, which describes malfunctions of biological and physiological character. It is something that physicians diagnose and treat and refers to pathological changes in the body.
2. By contrast, illness refers to the individual's subjective awareness and experience of the disorder. It relates to a way of being for the individual concerned.
3. Finally, sickness can be defined as a social condition that applies to people who are deemed by others to be ill or diseased. It refers to a particular status or role in society. (see Good 1994, for an insightful discussion of these points, also Helman 1997, Prior et al. 2000)

The distinction between illness and sickness, however, is rather problematic when it comes to young children. Even if we suppose that children are aware of their illness, their

health problems are typically acted upon by their guardians' observations, so that in the case of young children illness is always understood as sickness. For the sake of brevity, however, I will write about childhood illnesses in the remaining chapters. In this context illness refers to a child health problem that the mother's worry about and report during an interview.

It is also worth noting that the above classification is usually also related to a question about power: one of the perspectives is emphasized while others are marginalized.

Medical pluralism

The idea of medical pluralism originates from anthropological projects in developing countries but has been incorporated into research conducted in industrialized countries, too. Today, in all societies in the world with the possible exceptions of a few small and very isolated areas where only local care is available, plural sectors of medical care exist (Charles Leslie in the introduction to Janzen 1978).

Medical pluralism is a key concept in child health-seeking studies. It may be further dismantled to three distinguishable but not mutually exclusive aspects of the health seeking environment:⁴⁷

1. Cognitive medical pluralism refers to the plurality of beliefs, notions and explanatory models of illness and therapy held by practitioners and patients as well as other lay people who are not ill.
2. Behavioral medical pluralism refers to the multiple uses of available resources.
3. Institutional medical pluralism refers to the co-existence of different, sometimes competing, medical institutions, traditions of care and discourses.

By the early 1980s, the analysis of plural healing systems had become a routine part of research especially in medical anthropology. It is well established in empirical research all over the world that when people fall ill they exploit various kinds of treatments. The fact that people continue to use local and traditional remedies and healers after they have access to biomedicine is also well documented not only in the developing countries but in the industrialized societies as well. As Western modes of therapy and medical institutions are extended to the rural areas of developing countries they seldom exclusively replace old ways of curing. It is increasingly recognized that biomedical health services are not so

⁴⁷ Adopted from Ngokwey (1995) and Brodwin (1996).

much filling a void as they are offering an alternative to the health care already being provided by traditional practitioners and family members. (Brodwin 1996⁴⁸) Neither do the potential users of the new health services automatically adopt them in preference to their earlier health care practices. Rather, there is usually a gradual adaptation. New elements are added to old ones. Thus, rather than replacing traditional practices, modern techniques have increased the available health care options. (Hamnet and Connell 1981, Kirby 1997)

Early studies of medical pluralism tended to focus on what was assumed to be an unavoidable conflict between Western and non-Western medicine: according to research assumptions biomedicine was resisted because of local perceptions, knowledge or practices. Local treatment options were termed primitive, magical, traditional, folk or ethnic. More recently, emphasis has shifted from the competing aspect of medical systems to their integration and complementarity. (Carrier 1989, Ngokwey 1995) In fact, studies of the choice between modern and local care have rather consistently shown that most people continue to use several therapy options, rather than exclusively choose one over an other. Moreover, it has been also shown that people in general use first what is most available to them (for references, see Caldwell and Caldwell 1991). In cases of serious illness people are willing to make a greater effort to try a more distant option, which might work better (Lasker 1981).

Sectors of health care and disease etiologies

One additional typology that is commonly referred to assesses health-seeking from a slightly different angle. In any contemporary society, there are three sectors of health care:⁴⁹

1. the popular sector,
2. the professional sector, and
3. the folk sector.

The popular sector includes all therapeutic actions that people utilize without consulting any pay healers, neither professionals nor folk sector healers. There is overwhelming evidence that lay people manage most of the world's illness cases (Ryan

⁴⁸ Brodwin also provides an assessment of the controversy about fundamental issues of medical pluralism, such as definition of medical systems and the boundary separating medicine from other cultural activities.

⁴⁹ This typology was first put forth by Arthur Kleinman thirty years ago (1986 [1978]).

1998). The main arena of popular sector is home where illnesses are first defined and health care activities initiated. Typical actions are self-treatment, self-medication and advice given by friends, relatives or work mates. (Kleinman 1980) John Janzen (1978) describes a therapy management group consisting of relatives and other lay people who are responsible for decisions concerning help seeking for illnesses.

The professional sector comprises of organized, regulated professions. In most of the countries biomedicine has become a synonym for the professional sector. Auyrveda medicine in India has been used as an example of originally traditional or folk medicine that has become professionalized. One of the major contributions that anthropologists and sociologists have made is to demonstrate repeatedly that the health care system is a great deal wider than the boundaries of the modern medical profession, even in the industrialized countries. (Kleinman 1980)

The folk sector is operated by healers, either secular or sacred, who have little formal training when compared to, for example education in biomedical schools. Healers are not part of any "official" system and occupy an intermediate place between popular and professional sectors. Most folk healers share the cultural values of the communities where they live and access is usually easy and convenient spatially, temporally and culturally. Examples of the folk sector are shamanism and ritual curing, herbalism, traditional surgical and manipulative treatment. (Kleinman 1980)

This typology is helpful as a starting point for thinking about health-seeking. It may, however, be criticized for three shortcomings. Firstly, it underestimates the role of lay people while, as a matter of fact, the connection between sectors of health care are the therapeutic practices of lay people. Different sectors of health care systems primarily interact only because patients pass between them. (Kleinman 1980) Secondly, the typology is based on systems. It has been suggested, however, that people are really not dealing with health care *systems* but healing *resources*, which they exploit. The view that natural diseases ought to be treated with Western medicines and that illnesses caused by witchcraft or spirits are the domain of the traditional healers simplifies and misinterprets the empirical reality (Neumann and Lauro 1982, Worsley 1982, Morris 1986, Ngokwey 1988). The third line of criticism claims that the typology does not pay attention to the gendered division of labor. This downplays the large contribution of women. In most of the caring and curing cases lay people are synonymous with female members of the family. (Loustaunau and Sobo 1997, Amuynunzu 1998).

Diverse aspects of accessibility

Health-seeking studies typically distinguish between the utilization of various health services and access to services. Accessibility may further be divided into:

1. physical accessibility, which includes for example time and economic constraints, distance to the services, and
2. cultural accessibility, which includes for example communication between the provider of care and the client (Finerman 1983, Holian 1989).

It has been generally assumed that local healing offers a culturally and physically more accessible care option.

This way of thinking about accessibility is consonant with the ideological history of health behavior studies. In a review of trends in the utilization of health services in (primarily rural) “traditional” societies, Young described an important shift in the emphasis placed upon, or in the recognition given to, two different classes of constraints for the use of Western-style medical care. Earlier research, he found, was primarily concerned with cultural accessibility and discovering ways in which the traditional culture, in particular native medical beliefs and practices, acted to inhibit the populations' acceptance of modern health care, and with means of advising health personnel on how these cultural barriers might best be overcome. By contrast, more recent research has attempted to blame poor physical accessibility for low utilization rates. Physical accessibility has been one of the most important factors relating to how health services are provided. (Young 1981)

The physical-cultural duality related to accessibility implies a basic difference in the responsibility for poor health. Explanations that emphasize the inhibiting role of endogenous cultural influences in fact place responsibility for under-use of Western health-care services, and accompanying poorer health levels, directly on the people themselves. On the other hand, explanations centering upon the physical accessibility and organization of health services place primary responsibility for low rates of utilization, and the mandate for change, on the providers of care. (Young 1981)

People as health-seekers

Medical pluralism and sectors of health care provide the setting for people to seek care for health problems. The question about how people make decisions is a classic one in social

sciences. Without entering deeper into the methodological debate it can be said that the main dividing line in disagreement about behavior goes between:

1. the emphasis on the individual, and
2. the emphasis on structure.⁵⁰

These are obviously overlapping and linking entities. In studies that have focused on individuals, the emphasis is on agency. They are generally rational-actor models or based on single decision-makers which tend to choose between “traditional” or “modern” modes of behavior. An alternative approach is to examine health-seeking in the in broad structures or context including for example social interactions and norms, culture as well as economic and political factors. (Ewbank 1994)

In the very early period of development optimism people were looked upon as rational individuals who would abandon old traditional health behaviors as soon as possible and opt for efficient modern health care. Yet, as naïve as this behavior model was, it did hold to an image of people in developing countries as rational people, like “us”. (Stone 1992) Gradually, as the complexities of international development became evident, this perception of a given culture changed. Anthropologists in particular tended to see that the cultural belief system is the primary explanation for peoples' behaviors. In the early formulations about “cultural belief systems” people were seen as passive embodiments of traditional belief systems. (Pelto and Pelto 1997) Linda Stone (1992) has argued that after the early optimism, there have been two somewhat different views of the role of culture in health related research. The first view, which was held primarily by health planners and health project personnel, saw culture as a set of "beliefs" and "customs" which were potential “obstacles” to the introduction of new health measures and ideas. In this "culture-as-an-obstacle" view the inherent truth and superiority of modern biomedicine and modern health education was central. People in developing countries were not seen as rational and eager for change but as ignorant and tradition-bound. Cultural barriers persisted as the focus of research during the 1960s and 1970s. (Coreil 1990) A second, historically more recent perspective looked upon local cultures as a broad context for behavior within which Western health care should be integrated. Culture was seen as realm of "local knowledge", "indigenous medicine" and "local strategies for securing health". This second view has mainly been adopted by social scientists that saw culture more relativistically, more

⁵⁰ See Duncan et al. (1998) for discussion about Giddens' structuration theory, Pescosolido (1992) generally on the controversy between individual and structures.

positively and as a possible source for health development. It is important to note that both of these views, however, regarded culture as fairly static. (Stone 1992)

A new mode of thinking about the relationship between individuals, culture and health behavior developed in the 1980s. A frequent starting assumption was that in recurring decision situations where an alternative course of action was possible, members of a group come to have shared understanding, a common set of standards concerning how such choices are made. Cultural knowledge is seen as a set of rules or criteria for deciding among different possible ways to act. (Pelto and Pelto 1997) The post-modern turn within social theory has further emphasized the need for contextually sensitive social research concerning people's behavior (for references, see Garro 1998). This perspective focuses on power, politics and structural factors of health systems. As a result of theoretical research and a considerable amount of field experience, local beliefs and practices upon illnesses and curing are nowadays seen as flexible, changing and not very powerful as obstacles to adoption of new health care practices. (Stone 1992)

Perhaps the most important new idea to emerge with theoretical advancement and field studies was the recognition that the explanatory systems differ intra-culturally as well as inter-culturally. While earlier health-seeking studies assumed cultural homogeneity in the target population, later research recognizes intercultural variation and emphasizes variability across households even within single communities. (Pelto and Pelto 1997) There has also been an important theoretical and practical shift in the unit of analysis. It has been increasingly accepted that the household constitutes the primary locus for health related decision-making. Similarly, after decades of focusing on individual people or communities, scholars have moved to conduct research on the effects of social organization as well as the political and economic context of health care. (Coreil 1990)

Having said this, there still remains one analytical dualism closely related to people as health-seekers. This is the tension between *beliefs* and *knowledge*. Especially for the social sciences, belief has been commonly regarded as the preserve of the lay public while knowledge has been associated with expertise: patients hold beliefs about illnesses, doctors know about diseases. The division between knowledge and beliefs has been used to characterize the often implicit assumptions about the superiority of Western biomedicine. The term knowledge contains the supposition that the information is a "scientific fact", based on universally and cross-culturally valid truths. It refers to people's knowing about modern biomedical information, such as the role of the mosquito in causing malaria. The term belief, in contrast, refers to "traditional ideas" about illnesses or erroneous folk models that construct obstacles to appropriate health-care seeking. To Western eyes, beliefs look irrational or non-rational. (Pelto and Pelto 1997, Hunt and Mattingly 1998)

Studies on beliefs, knowledge and behaviors flourish in health research concerning developing countries. However, this dualism tends to overlook complex local conceptualizations of health. "Local knowledge" is a concept in anthropological theory that was coined by Clifford Geertz (1983). It poses local ways of knowing, perspectives and understandings over and against cosmopolitan forms of knowledge (Del Vecchio Good 1992).

3.4 Concluding comments: behavior as the interface between analytical approaches

A number of themes have emerged from the above discussion dealing with analytical approaches to child health and behavior. Firstly, by virtue of the very complex nature of its object, child health research forms a multidisciplinary stage open to different approaches. As Megan Vaughan (1994) has put it: "it seems to me that the world of illness and healing is just too large and too differentiated to only one approach". A well-established line separating two major research blocks of the field is drawn between social sciences and biomedicine. However, there have been attempts to reconceptualize child health research in the developing countries and to overcome this conventional (and perhaps artificial) divide. Besides biomedical and social science lines, I also discussed the advantages of integrated research approaches. These models explicitly bring behavior into research design. Thus, they have obvious implications for the present study.

In the integrated models, health behavior is seen as an important factor contributing to children's health status by functioning as a mediator between culture and biological mechanisms. The principal background assumption is that health status in the developing countries can be ameliorated only if changes in health behavior are introduced simultaneously with modern health care provision. The two research programs that I described above have argued that child survival is an end product of a web of factors and needs to be examined from a broad perspective. In the M & C framework personal illness control is considered as one of the five factors contributing to child survival. Similarly the health transition project also emphasized behavioral elements of health interventions. The two projects have by no means produced a final framework for the study of child health and child survival. The importance of the integrated approach, however, lies in its ability to guide thinking and study designing. Currently, there is clearly a gap between expansive multi-faceted studies of human behavior and the immediate focus on the needs of disease control programs and other welfare activities (Berman et al. 1994). While the biomedical

approach focuses on biological causation of diseases and the social science approach focuses on the social and cultural mechanisms associated with sickness and illnesses, the integrated approach aims at selecting the meaningful factors from both spheres. Thus, the integrated approach at least implicitly abandons the idea of prioritizing either social or biological factors related to child health. However, more work is needed for understanding the interactive role of various factors. For example Lincoln Chen together with Christopher Murray has continued research and development of the framework (Murray and Chen 1993).

Discussion on child health-seeking in developing countries is not a loose strand in public health but it conveniently fits into the health behavior research tradition. Despite this, health behavior research concerning developing countries has taken quite different tracks from the discussion going on in the industrialized countries. The implicit assumption in research appears to be that the focus of health-seeking studies in developing countries should be placed in a different framework from that in the industrialized countries. In Europe and North America research nowadays mainly aims at understanding how people go about maintaining good health. When it comes to the developing countries the focus is on health problems, illness, disease, and mortality. Also biomedical technologies that are considered to be useful in these countries are examined. Thus, many aspects of the rich and versatile health behavior research tradition as it has arisen in the industrialized countries are practically non-existent in the developing world. The early health behavior studies conducted in the industrialized countries in the 1960s had a similar kind of biomedically-centered focus.

The toolkit that I introduced above offers concepts for analytical reading of previous health-seeking literature and empirical material. The tools consist of different ways to conceptualize health, health-seeking, and people as health-seekers. The assumptions guiding the analytical approach is that child health-seeking is not an established study area and one important task of the present study is to contribute to the on-going discussion by taking into account the broader context in which health behavior is situated.

In sum, the above examination pictured child health-seeking as a challenging object that may be looked upon as an interface between study approaches.

PART 2: LITERATURE REVIEW: FOCUS ON CHILD HEALTH-SEEKING IN DEVELOPING COUNTRIES

4 METHODOLOGICAL NOTIONS IN PREVIOUS LITERATURE

While chapters 3 and 4 reviewed more general discourse on child health and health behavior, the aim of the following chapter is to examine how previous research has portrayed child health-seeking particularly in developing countries. The organization of the text is based on Marc Augé's (1985) formulation of the relationship between theory and empirical research in the history of anthropology of illness. He concludes by stating that “one must first know what one is looking for before one knows what to search”. With this, he refers to the two objects of any research project, which are:

- the empirical object, and
- the intellectual object.

An answer to the first, pragmatic question can only be proposed if one has already answered the second question concerning methodology. Therefore, in order not to put “the horse before the carriage” (Augé 1985), after a description of the materials and method of the present review, I shall proceed with a methodological query. This review annotates the materials with the intention to see, how child health-seeking has been constructed in previous literature. (The next chapter lists empirical findings on child health-seeking in developing countries)

In his book covering central issues in social science research Tim May introduces different schools of thought followed by related criticism. The basic assumption of the book is that there are different ways of viewing how we gain knowledge of social phenomena (May 1997). This definition of methodology comes close to the view of methodology that I had in mind for the purpose of the present review: Child health-seeking is located at the crossroads of various disciplines. It is even debatable whether the object is more of a social nature or more a biological phenomenon. As a consequence of this, studies are characterized by divisions with regard to the aims, methods, approaches and evidently, findings.

The text below is organized according to the themes from the two preceding chapters discussing contextual issues, analytical approaches and analytical tools complemented with notions that rose from the literature.

4.1 Materials

There is an abundance of literature related to child health in developing countries. Below, I will describe the inclusion criteria and data sources in the present review. Detailed list of literature is included in appendix 2.

Inclusion of studies

Based on the general design of the present study, I rather randomly started locating relevant articles. However, after a review of some 30 articles that I found first, I developed criteria for inclusion of the studies in the literature review. The main search terms that I used were:

- child / children / infant
- health / illness / disease / mortality / morbidity / survival, and
- developing countries (and its synonyms in the *Thesaurus*).

As anticipated, these terms provided a massive amount of references, mostly irrelevant to the theme of the present study. For example, POPLINE, a database that specializes in public health, retrieved almost 8000 titles under the combination of child health and developing countries. The modifiers that were used to limit the number of articles can be grouped under two different categories: behavior related terms and child health problems. The terms are shown in table 7 below.

Not even this long list of search terms retrieved the relevant articles inclusively as many rather recent articles were missing from the list of search results. This is probably due to the instability of terminology that was discussed earlier. Therefore, I read through all the lists of references in the articles that were found. These lists not only helped in locating such texts that the databases did not retrieve but also enabled working backwards in history, locating older texts that are missing from the electronic databases.

Table 7. Modifiers in literature search.

Behavior related	Child health problems ⁵¹
behavio(u)r	malnutrition
treatment seeking, health seeking	diarrh(o)ea (ORS)
management	fever
response	cough
concepts, perceptions, beliefs	respiratory infections (ARI)
utilization (of health services / care)	measles
resort to care	
decision making	

The ultimate inclusion criterion for the material was whether the content of the examined the connection between the following two elements:

- childhood health problems, mortality or possibly health maintenance, and
- behavioral response by guardians.

Therefore, I excluded from the analysis studies that merely examined health beliefs because the behavioral element was missing. An example of an article excluded based on this criteria is a study by Mara Mabilia (2000) entitled "The cultural context of childhood diarrhea among Gogo infants". The text focuses only on diarrhea related beliefs. Another type of study that was not included in the analysis focuses exclusively on developing health care services. An example of this line is an article by Atakouma et al. (1999) titled "An epidemiological study of health care seeking behavior by children under the age of 5 years at hospital emergency services in Togo".

The main practical difficulty that I encountered while searching for the articles was that some of the references were to unpublished studies such as theses and memos. Quite often though, the same authors had also published material on the very same themes. Additionally, libraries in Finland were not able to get a hold of all the non-peer-reviewed journals, especially those published in Africa and Asia.

⁵¹ These are the major "killer diseases" in the developing countries and are typically diagnosed in children. For further discussion of this see chapter 2.2.

Data sources

For the review I systematically searched for material in several library databases including:

- electronic databases (Ideal, Medline, POPLINE, Social Sciences Citation Index, Sociofile),
- a printed database (Sociological Abstracts), and
- electronic journals (EBSCOhost, ABIinfo).

In the searches, keyword, title and abstract information were used.

After an initial read-through of the texts, I re-read them paying particular attention to the contextual notions and analytical frame that were examined in the two previous chapters of the present study. As the number of texts included in this review grew, I used a Microsoft Excel worksheet to keep track of the observations. This also enabled the coding of information, creating variables based on the notions, and counting and presenting numerical results where relevant.

A total of 120 pieces of articles and research reports met the selection criteria.⁵² It is obvious from table 8 below that *Social Science and Medicine*, which combines medicine and social sciences, is a central journal for child health-seeking studies.

Table 8. Publication type of health-seeking texts.

Journal	n=120	%
Social Science and Medicine	48	40
Other social science journals	29	24
Medical journals	24	20
Anthropological journals	11	9
Epidemiological journals	5	5
Research reports	3	2
Total	120	100

⁵² The text below is based on the analysis of the entire literature material that was collected for the present review. Thus the total number is 120. In order to make reading easier, I do not repeat the total number again.

4.2 Context in child health-seeking studies

All of the texts included in the material have a chapter or a section where the context is elaborated. In most of the studies, the place for contextual issues is the first chapter or paragraph where authors discuss in a general manner the themes that they consider relevant to the background of the study. In a few studies, only the concluding chapter includes discussion about results and context to interpret them. While reading the material, I interpreted the exclusion of certain aspects to be as revealing as inclusion of some other aspects.

In the present material, the context is typically based on the concern with poor child health or high child mortality in general or mortality caused by certain diseases in developing countries in particular. Combined with this is the idea of improving the adverse situation either with a limited health care intervention or primary health care measures. The texts usually first present demographic data on child health problems in developing countries in general or report mortality caused by a certain disease. The next chapter usually scans biomedically apt measures to prevent or treat the health problems under consideration. Especially in the case of oral rehydration therapy (ORT) the authors thoroughly go through the treatment procedures emphasizing the easy way to accomplish the treatment. Thus, in the studies it is more or less implicitly stated that children die in vain. Additionally, it is assumed that if modern health care services were used in a proper manner the children would survive. Openings in the studies include for example "Dehydration due to diarrhoeal diseases is the leading cause of infant and child death in many developing countries. --- Oral rehydration therapy (ORS) is cheap, effective and can be administered at home. --- The degree to which ORS has been incorporated into people's health-seeking practices is variable (Hudelson 1993).

Both of these elements (poor child health and a medical fix) are present in 72 (60%) studies. In an additional 35 (29%) studies there is a reference to high child or infant mortality as a justification for the research project but the reference to biomedical care is missing.

The remaining 13 (11%) texts examine child health-seeking either from the point of local people or assess previous methodological assumptions. An example of the former category is a study by Evelyn A. Early (1982) in which she attempts to examine child well being by using narratives. The study focuses on the local understanding of curative actions and bases the analysis on the narrative logic amongst women. An example of the latter category is an article by Didier Fassin (1986). He challenges the anthropological

assumption which regards the village as a place of tradition and town as a place of modernity as the context of child health-care practices.

Besides the concern about mortality combined with health interventions, an additional cornerstone of the studies is the central role that is allocated to individual diseases. Table 9 below shows the health problems that are addressed in the present material. Typically, poor child health is approached by focusing on one of “the killer diseases” in developing countries (see chapter 2.2). It is emphasized that these diseases are (biomedically) of an ordinary nature and easy to treat.

Provided that economic factors are included in the study design, they are typically approached at micro-level, which is the case in 27 (22%) studies. Macro-economic issues are included into the contextual components of a study only in 8 (7%) texts.

Table 9. Health problems that are investigated in child health-seeking studies.

Health problem in the focus	n=120	%
Diarrhea	33	27
Not a specified health problem	30	25
A combination of a few ordinary diseases	22	18
Respiratory problems (ARI, pneumonia)	19	16
Malaria	9	8
Measles	3	2
A locally recognized health problem	2	2
Vaccinations	2	2

4.3 Analytical approaches in child health-seeking literature

Below, I intend to examine previous child health-seeking studies in order to see how analytical issues have been worked out. Study designs in the present material are drastically variable. The examination does not attempt to capture versatility but rather reaches beyond it for the common characteristics.

Research scenery

Basically, child health seeking studies either conform to the division between the biomedical and social science sphere or they may operate in a space mediating between

these domains. I tested how these categories fit into the present material by examining the ultimate goal set for the studies, research question, variables and possible recommendations.

To start with, in some of the texts the goal is explicitly spelled out. In the majority of the material, however, the goal is implicit and needs to be discovered “in between the lines”. In most of the studies (n = 61, 51%), the ultimate aim appears to be planning for disease specific interventions. It was already seen above that several studies target diarrhea, pneumonia and malaria in particular. Accordingly, ORS, ARI and malarial interventions are common. Several studies (n = 44, 37%) in the material aim at an improvement in the provision of primary health care services at the study site. In the remaining 15 (12%) studies where the provision of health care is not studied the aim is to describe health seeking within the local context or to examine a research method.

Next, I examined the strategies employed to achieve this goal by observing the way that the research question was formulated. In almost every text there is a sentence stating the research problem or research task. Table 10 below shows the categorization of the texts by the main research problem. In about half of the texts questions concerning guardians' (which usually equals mother as will be seen later) perceptions about illness in their children and their opinion about suitable ways to treat the ailing child are studied. There are an additional 30 texts where cognitive issues are of central importance even if they are not included in the study question. Another frequent research question is about factors that determine the utilization of health services.

Additionally, I scrutinized the present material for all the variables that are included in the study design. Studies, of course, vary in regard to the number of factors that are used and the way that they are considered. Typically, anthropological designs describe child health-seeking in great detail whereas epidemiological designs aim at reliability and validity with a large number of cases and limit the number of factors that are analyzed. Therefore, the number of variables is only indicative of the frequency of the factor in the material. It does not indicate the importance attributed to a variable. Nonetheless, it is obvious that a large amount of factors have been studied as having an effect on or association with child health-seeking.

However, the emphasis is clearly placed on cognitive issues as determinants of health services utilization, on micro-level economical factors and on so called background factors. Biomedical (or biological) information on diseases is relatively rarely examined. If, however, biomedical factors are included, they are often used as a test for mothers' ability to guarantee appropriate treatment for an ailing child. An example of this is an article by Olango and Aboud (1990) where the authors compare mothers' responses to biomedically appropriate answers and calculate a knowledge score.

Table 10. Classification of research question that is used in child health seeking studies.

Research question	n=120	%
Perceptions and practices	61	50
Determinants of utilization of health services (all options)	22	19
Normative aim, to guide research	8	7
Local rationale	6	5
Access to health care	4	5
Other	16	14

The central position granted to cognitive issues has led to a central role for health education as a recommended solution to child health problems. The background assumption in health education programs is that if local beliefs are upgraded into biomedical knowledge, mothers' child health-seeking behavior will change.

Health behavior research

In the light of the present materials, child health-seeking in developing countries appears to be a rather recent study subject. Included in the material, there are only 7 (6%) texts that were published in the 1960s and 1970s. There are more texts from the 1980s (n = 27, 23%) and research started flourishing in the 1990s (n = 75, 63%). During the first years of the new millennium, 11 (8%) texts were published. The flourishing of child health-seeking studies has occurred after the adoption of primary health care in developing countries as was discussed earlier. However, because of this relatively short time span, the material does not allow for more detailed chronological analysis. Only some rough references to “earlier” and “more recent” are plausible in some obvious cases.

If one then looks at the sub-groups of health related behavior it is obvious that positive aspects of behavior related to child health are not dealt with in any way. Throughout the years the focus has been on the connection between behavior and health problems; all of the texts in the present material are entirely problem based. Table 11 below shows in more detail the relationship between child health status and behavior as it has been adopted in the present material. It is only a few studies (n = 15, 12%) that have actually examined whether there is a relationship between behavior and child health. In most of these studies the selected outcome is child mortality (n = 11, 11%), but 4 (3%) studies address malnutrition.

Most studies grant an important position for medical technology: out of all the texts, only about one fifth (n = 23, 19%) do not offer a biomedical solution to the child health

problem(s) in question. One fourth of the studies (n = 29, 24%) promote primary health care. The remaining texts advocate a single biomedical treatment technique, most notably ORT for diarrhea and antibiotics for respiratory infections.

Further information related to study designs in the present material is collected in table 12 below. Data is typically collected by using a survey questionnaire or with a combination of anthropological and epidemiological methods such as Focus Group discussions, observations and questionnaires. Study designs that use anthropological methods exclusively are relatively rare. Additionally, most of the studies aim at describing epidemiological findings.

Table 11. Relationship that is assumed between health behavior and child health status in study materials.

Relationship	n=120	%
Reference to mortality	48	40
Indirect reference to positive effects of modern medicine	30	25
Assumed causation / association	14	12
Causation / association / correlation analyzed	12	10
Not discussed / not possible to determine	16	13

Table 12. Characteristics of child health-seeking studies in study materials.

	n=120	%
Data collection	53	44
Survey questionnaire		
Combination of epidemiological and anthropological methods	21	18
Several anthropological methods	13	11
One anthropological method	9	7
Ready data set	7	6
General description of customs	4	3
Observation	2	2
Other	11	9
Examination of data		
Descriptive	80	67
Analytical	30	25
Combination of analysis and description	10	8
Aim ⁵³		
Epidemiological (end point)	88	73
Ethnographic (process)	22	18
Combined	9	8
Other	1	1

⁵³ For discussion of the differences between epidemiological and ethnographic designs, see chapter 3.2.2.

4.4 Utilizing analytical tools

In this section I will assess the materials by using the set of analytical tools that I assembled above in chapter 3.3. While the two previous sections above discussing have observed the general background assumptions regarding the context and analytical approaches of the present material, the following examination takes the analysis one step closer to the empirical settings of the studies.

Perspectives on health problems

As I discussed earlier, a basic conceptual dimension in health related discourse is encapsulated in the division between disease, illness and sickness. These categories highlight diverse aspects of poor health. All of these terms have been used in the present material. The connotations of the terms, however, are not usually explicated. Therefore, the material cannot be simply allotted into the categories according to the terms that are found in the text. Instead of a mechanical classification of the studies, I examined different views on health problems that are incorporated in the studies.

Only in 11 (9%) studies has the interviewee been in a position to select the health problem that is investigated. In the remaining texts (n = 109, 91%) it was the researcher who decided upon the health problems that were included in the examination. In these studies the guardians of those children whose ill health and related health-seeking practices were assessed did not get to express their opinion about the meaning of a given health problem or for example, to rank the importance of different health problems.

A complementary way to examine the approach to poor health is to find out whose definition about the health problem is used. Is it the researcher who has decided upon the aspects that are examined or are the interviewees' opinions included? In 41 (34%) texts of the present set of materials, only variables that the researcher has selected are examined. This perspective largely corresponds with the biomedical discourse. Local definitions and vocabulary are used in 10 (8%) texts. In these studies, the perspective largely coincides with illness perspective. However, rather than adhering to one of the views, it is more typical for child health-seeking studies to combine various points of view. In 69 (57%) texts, some elements of guardians' perspective and biomedical reasoning are included. A good example is an article by Escobar et al. (1983) titled "Beliefs regarding the etiology and treatment of infantile diarrhea in Lima, Peru". The title itself combines two key concepts that are commonly used: beliefs and a disease, in this case diarrhea. Mothers'

beliefs are examined and reported but the appropriateness of their way of thinking is ultimately judged against biomedical knowledge.

Examining setting

A key tool for assessing the setting for health behavior is medical pluralism. To begin with, a surprisingly large number of child health-seeking research projects (n = 32, 7%) completely ignore medical pluralism as the setting. Out of these, 22 (18%) pieces strictly deal with the modern sector of care without referring to local care options, behaviors or perceptions. Examination is exclusively confined to local ways of care in 6 (5%) texts, and 4 (3%) texts do not mention the setting at all.

In one way or another, the idea of medical pluralism is present in the remaining 88 (73%) pieces of research. Table 13 below further looks at the way the pluralistic health-seeking setting is covered. A starting point in all of the texts with pluralism as a backdrop is, explicitly or implicitly, the institutional pluralism existing in the study location. Besides co-existing medical institutions, some studies are based on an assumption of cognitive and behavioral pluralism, while some are based on only one of the two.

When examined more concretely, the constituents of a plural setting can be reduced to two origins: those derived from traditional medicine and those from biomedicine.⁵⁴ The relationship between these elements is usually presented as one of conflict, rivalry and

Table 13. Ways to conceptualize pluralistic health-seeking environment in the present material (studies fit to several categories).

Medical pluralism	n=88	%
Institutional pluralism	88	100
Cognitive and behavioural pluralism	44	37
Behavioural pluralism	23	19
Cognitive pluralism	15	12

⁵⁴ Here again, terminology is not established. Traditional medicine, local medicine, ethnomedicine and allopathic medicine refer to about the same entity. Biomedicine, Western medicine and scientific medicine have the same implications.

incompatibility. In this confrontation, biomedical care is taken to be of superior effectiveness and efficiency without any further discussion. This is illustrated in 78 (89%) out of the 88 studies, which are oriented towards medical pluralism. The components of plural setting that are picked out for analysis are beliefs belonging to the traditional sector and diseases belonging to the biomedical sector. It is apparent that mothers' beliefs and actions are examined only in order to be able to change them for the better. The competing nature of local beliefs and biomedicine is conveyed well in the following example: "Mothers' ethnomedical models of diarrheal disease and concepts of appropriate treatment are discussed, as are practical problems relating to the effective implementation of ORT in such a setting" (Mull and Mull 1988).

The other conceptual division that is familiar from health behavior research is the division of different sectors of care as suggested by Arthur Kleinman. This division has rather seldom been utilized in child health-seeking studies. To some extent, sectors are made use of in 31 (26%) studies. In almost all these cases, however, the sectoral model is not fully taken advantage of, and description or analysis is confined to child health-seeking that takes place at home versus care actions outside the home. Home care largely covers the popular sector of the model. On the other hand, professional and folk sectors have not been used to enhance study designs.

People as health-seekers

Below, there is a set of three tables that illustrates the assumed active agent in child health-seeking studies. Table 14 shows that the person who has been contacted for data collection is predominantly the mother. Table 15 indicates that as a rule, analysis or description is almost always confined to the level of the individual and determinants related to her (very seldom to him). In 12 (11%) studies services are also mapped out. Finally, table 16 shows the person who is assumed to be the active agent in child health-seeking. Here again, the responsibility to take actions is assigned to the mother. Only in a few studies are both of the parents or other relatives considered. In this material, it is mainly mothers who take care of their children, respond to illnesses, manage diseases, act upon symptoms, and react to complaints.

Table 14. Attributes of child health-seeking studies included in the present material.

	n=120	%
Person who has been contacted for data collection (relationship to the child)		
mother	79	66
not defined, author's experience	16	13
family / relatives / household	9	8
mother and health care provider	6	5
mother and grandmother	5	4
parents	4	3
health care personnel	1	1
Level of analysis		
individual	92	77
individual and services	12	10
family / household	5	4
individual & community	3	2
other	8	7
Person who is assumed to take an active role in child health (relationship to child)		
mother	84	70
not defined, impersonal form	12	10
family / relatives	10	8
parents	9	8
mother & grandmother	5	4
mother	84	70
	12	10

I further examined how mothers' behavior is conceptualized in the present material. The findings are shown in table 15 below. In the present material, there are 48 (40%) studies in which it assumed that the mothers behave rationally within the confines they meet at least in the non-utilitarian and undemanding sense.⁵⁵ The confines of behavior that are considered are of two types: those set by culture and material limits. An example of this kind of reasoning is a study by Jocelyn Grace (1998) where she describes the order of resort for parents with children suffering the symptoms of respiratory-tract infection and diarrhea. Grace attempts to answer the question why parents choose to go to local healers instead of a health center by asking the parents about the underlying logic of their decisions, as well as discussing the standard of services.

⁵⁵ According to this broad definition, an actor's behaviour is rational if it can be shown that her beliefs about what her behaviour can do are more or less consistent with what it does, as she observes the results. See Young (1981) for further discussion about rationality.

Included in the present material there are quite a few studies in which mothers are considered to behave in an irrational way. The very word irrational is not used as such but expressions like traditional, ethnic and peasant substitute it. Some of the studies that look upon mothers as irrational still allow an active role for her. Additionally, some studies treat the role of mothers merely as an object for health education.

There is still one final table (number 16) related to people as health-seekers which shows the role that culture is assigned in the present material. Typically the studies do not attempt to define culture. However, there are references to the relationship between culture and behavior in most of the studies. One main tendency in the thinking about culture is related to the elasticity of it: some studies consider culture as guiding behavior, some as determining behavior. There is also a moral dimension to discussions of culture: some studies see culture as harmful, some aim to change it, some rather mildly claim that culture needs to be understood. In two of the studies culture was found to be of less importance than was expected.

Table 15. Assessment of mothers' role as in child health-seeking studies included in the present material.

Mothers' role	n=120	%
Rational agents within context	48	40
Members of traditional / ethnic group	29	24
Traditional but active health-seekers	14	12
Objects for health care and health education	14	11
Units of analysis	11	8
Not discussed	4	3

Table 16. The role assigned to culture in child health-seeking studies.

The role of culture	n=120	%
Culture guides behavior	31	26
Culture is traditional / harmful / a barrier	30	25
Culture needs to be changed	19	16
Culture determines behavior	19	16
Culture not touched	17	14
Culture needs to be understood	2	2
Culture is not as important as was assumed	2	1

Child health related beliefs play an important role in the findings of the studies. It is not really possible to count the terms that have been used but it appears that in the past, research reports were about traditional beliefs, whereas more recently they address lay beliefs. Some of the recent studies use concepts such as ethnomedical diagnoses and the indigenous classification of diseases and local knowledge, but this does not change the fact that cognition is given a central role. In one form or another, beliefs are reported in 94 (78%) of the studies. One of the oldest texts in the material, a study by Morley et al. (1963) describes how traditional parents in Nigeria are "uncaring about their children with measles". Parents believe that children with measles should not be washed but according to the researchers, this causes deaths. Almost thirty years later Burleight et al. (1990) describe how mothers in Guatemala believe in hot-cold classification and treat children accordingly.

Accessibility

An examination of the accessibility of various health care options has conventionally been used as an analytical tool in health-behavior studies. In the present material, accessibility is the main analytical tool of 3 (2%) studies. However, accessibility is among the variables that are included in the study design in 33 (27%) texts. Out of these, 21 (15%) take into account physical accessibility, i.e. distance to the health service. The few remaining ones also consider culture, money related issues and the time factor.

Overall, accessibility is an analytical tool that has been very little utilized in child health-seeking literature.

4.5 Conclusions: a portrait of a child health-seeking study with comments

Below, I will attempt to draw the threads together and provide a picture of how child health-seeking in developing countries has been portrayed in the previous literature. This is a methodological portrait. The next chapter will look at the empirical findings of these studies.

Notions on the context

Context essentially directs the focus of research towards issues that are relevant and interesting in relation to the subject. It is really not possible to introduce new factors outside the context. As a whole it can be said that the contextual issues that are examined in the material that I analyzed for the present review are confined to the biomedical sphere: most importantly studies focus on high childhood mortality caused by ordinary diseases with biomedical health-care as a suggested solution. Typically, the context guides researchers to identify factors, which deter people from using modern health care. Contextual aspects beyond these ones are just about absent from study designs. If one wants to give a nametag to it, according to the scientific connotations child health-seeking studies fit under the applied biomedical paradigm. The studies identify child health related behaviors in relation to biomedical norms. In other words, biomedicine is used as a yardstick. If one refers back to chapter 3.2 discussing health behavior research, it can be stated that studies conducted in developing countries bear a resemblance to the situation in the industrialized countries before the 1970s. At that time, medical professionals and medical paradigm defined how health behavior was studied.

This kind of context is somewhat problematic even by biomedical criteria. Firstly, studies that examine a single health problem miss the cumulative effect of simultaneous diseases that was discussed in chapter 2.2. Secondly, malnutrition is very rarely touched on in these studies. Very importantly, the above-described context excludes macro-economic matters. The symbiosis of child survival and biomedicine is so dominant in the material that other possibilities of building a framework have largely been left unexamined. The kind of questions which a macro-economic analysis adds to the study design concern the context for child health-seeking, for example the general poverty prevailing in the developing countries.

Implications from the analysis

Interestingly, the analytical approach of the present material moves away from pure biomedicine: In most of the studies that I read for the present review the approach may be called biocultural,⁵⁶ typically consisting of biomedically recognized diseases and beliefs and practices related to it.

⁵⁶ The term is derived from Hans A. Baer (1996).

Additionally, in the analysis, mothers are allocated a central role. In a typical study, materials are collected by interviewing mothers. Mothers are also considered as the active agencies in child health-seeking. Additionally, women are examined as individuals. Thus, much of this literature manifests, either directly or covertly, a statement supporting women's responsibility for restoring the health of their children.

The utilization of individuals as study units has some implications for empirical results. According to the level for analysis findings report about characteristics of women. Typically, mothers' beliefs are linked to the health-seeking behavior. In the light of what is known about the position of women in most of the developing countries (and also industrialized countries) this choice is not particularly apt. Even if it is the mothers who take care of children on a daily basis they are seldom in charge of their children's well being. Other family members, especially the husband and older women and men, powerfully guide and restrict the mothers' behavior.

Comments on power relationship

Finally, but perhaps most importantly, the examination of child health-seeking literature points to power related themes and unbalanced power relationships between the researchers and the people who are examined. None of the studies included in the present material openly take up this topic but interesting methodological and empirical issues arise if authority and control are considered.

Firstly, there is the general question about context and analysis: whose knowledge counts? Who is in a position to say which factors are linked with child-health-seeking? Is it the mother's beliefs or is it economic conditions in the study location or perhaps macro-economic trends in the country? Additionally, there is of course the question about appropriate solutions to the problems. Is it better to organize health education or would some another solution work better?

The answer to the above questions is rather obvious. In the present material, the researchers choose the context and analytical approach. Therefore, researchers control the empirical findings and also get to suggest a solution to child health problems. Yet, the leading role in improvement of child health in developing countries is reserved for the mothers because they are key people in the provision of health care. All things considered, one can plausibly argue that the mothers are positioned as the classical anthropological *other* and the researcher is one of us. Ruthbeth Finerman (1995) has called this way of conceptualizing health-seeking "the parental incompetence model". The guardians are blamed for high child mortality.

5 EMPIRICAL FINDINGS IN PREVIOUS LITERATURE

In order to pursue the empirical object of this review I will examine aspects that are already known about child health-seeking in the developing countries based on previous literature, in other words, the empirical findings. The text is based on the materials that I described in the previous chapter.

Studies included in the present material have been conducted in 37 different countries. Most of the texts are about children in Africa (n = 54). There are fewer papers on child health-seeking in Asia (n=35) and in the Latin American countries (n = 22). Typically, studies have been conducted in a rural location.

The fact that the studies have been carried out in so many different countries with very different aims using a variety of methods makes the synthesis of empirical results demanding. Basically, however, research on child health-seeking has concentrated on two key questions. Firstly, as the the previous chapter showed, studies have focused on cognitive issues and examined how beliefs, attitudes, perceptions and knowledge affect the treatment of children's diseases. Secondly, studies have examine how a cluster of other inter-connected variables such as accessibility, quality of care and financial issues affect patterns of child health-seeking.

5.1 Cognitive issues and child health-seeking

One feature that emerged in the discussion about the research scenery was the centrality of cognitive issues in child health-seeking studies. Almost half of the research questions were related to beliefs and related practices and a great number of the variables in the studies were about cognitive issues.

Literature has clearly indicated that both identification and response to illness are closely linked to cultural beliefs (Adetunji 1991, de Meer et al. 1993). Texts in the present material provide evidence of a large selection of beliefs and knowledge related to child health-seeking in the study sites. Additionally, it is obvious that mothers' beliefs in various locations substantially differ from established biomedical views with regard to the symptoms, causation and treatment of child health problems. There is some consistency in the beliefs from one place to another but some drastically differ. For example teething and

diarrhea are linked in several locations. Olango and Aboud (1990) report that more than 90% of mothers in rural Ethiopia believe that teething causes diarrhea. According to the findings of Adetunji (1991) in Nigeria, 44% of the Yoruba mothers reported teething as the major cause of diarrhea. Then again in Peru, diarrhea is not seen as infectious disease but located along a hot-cold axis (Escobar et al. 1983).

Similarly, treatment practices vary considerably. At least in some locations researchers have identified health problems that are believed to belong to the local healers. McKee (1987), for instance, found that in Ecuador, there are two locally defined sub-types of diarrhea that according to the mothers, need to be treated by a healer. Similarly, according to Feyisetan et al. (1997) if children in Yorubaland have *abiku*, they are never brought to the health center.

But taken more generally, what has been learned about the relationship between cognitive issues and health-seeking practices? It appears that earlier it was assumed without any further justification that beliefs and actual treatment go hand in hand. For example in 1960, Jelliffe and Bennett described indigenous medical system with etiologies, diagnosis, treatment and practitioners differing from the biomedical system. (Interestingly, the authors do not specify the location but generally talk about “tropics”!) Along similar lines, de Zoysa et al. (1984) show that perceived cause was the only significant predictor for the utilization of formal health services in Zimbabwe. However, the number of studies published in the 1960s and 1970s in the present material is considerably small and it is difficult to base generalizations on them.

More recently, the beliefs-behavior axiom has been further scrutinized and a number of contradictory findings have been achieved. DeClerque et al. (1992) report a repertoire of local beliefs from Honduras. According to the authors, however, there was no conflict between indigenous beliefs and modern treatment. Hunte and Sultana (1992) made a similar finding in Pakistan. Among others, Jocelyn Grace (1998) gives an account of the local understanding of biomedical technologies and pharmaceuticals in Indonesia. She additionally describes how the “modern practitioners”, e.g. nurses and midwives, have also developed a hybrid form of biomedical rules.

It also appears that people willingly use a combination of medicines originating from different medical paradigms simultaneously (Boerma and Baya 1990, Omorodion 1993). Hunte and Sultana (1992) have called this kind of juggling with alternatives a trial-and-error method. Thus, from the users point of view, the definition of medical sectors seems somewhat irrelevant. Actually exclusive use of indigenous care has been shown to be relatively rare (Maina-Ahlberg 1979). The most recent reports consistently show that

especially modern medications are widespread in developing countries (van der Stuyft et al. 1996).

Additionally, it appears that it is not apt to operate with the terms belief and knowledge. Neither is it enough to use alternative terms, but one needs to reflect closely on the nature of the cognitive issues in child health-seeking. Anthropological studies reveal that there are more than just two levels in cognition. Firstly, there is the not-knowing category. For example, mothers whom Muhe et al. (1994) interviewed in Ethiopia expressed that they did not know the causes of throat infection. For Yoruba mothers the causes of measles and pertussis were usually unknown (Adetunji 1991). Secondly, there is the uncertainty category. Evelyn A. Early (1982) used therapeutic narratives to describe how mothers who are uncertain about illnesses make sense of them. And thirdly, there is the knowing category. For instance, mothers in India report that they know that a child has *phurgrya* when her / his stomach is hard, the child does not feel hungry, and has constipation. According to mothers, *phurgrya* occurs only in older children. Eating certain foods such as papaya and banana causes it. Treatment consists of rubbing certain seeds, kerosene, limes and *ghee* on the stomach. (For a more detailed description, see Chand and Bhattacharyya 1994). According to biomedicine, mothers' knowledge concerning *phurgrya* is definitely wrong. Most of the studies which operate on the beliefs–knowledge axis miss the cognitive space in between.

5.2 A cluster of other inter-connected factors affecting health-seeking

Below, I will discuss empirical findings related to a cluster of other factors than cognitive issues that have been examined in connection to child health-seeking.

Aspects of accessibility

In the course of the discussion about analytical tools for health behavior accessibility was suggested as a plausible measure. Accessibility was further divided into physical and cultural components. Discussion about beliefs already partly touched upon the theme of accessibility: it was seen that according to empirical findings beliefs form a barrier to use modern health care only very seldom.

Physical accessibility, usually measured as distance or time, has shown to be of importance in several studies. In Jordan, Adnan and Walker (1986) showed that physical

accessibility to biomedical services is the most important factor in the use of Mother-and-Child care services. Becker et al. (1993) showed in the Philippines that longer travel time to the family planning clinic was associated with lower use. In Rwanda, the higher up the mountains the women lived, the more infrequent their health-seeking at the health center became (Csete 1993).

The time factor brings an additional aspect to accessibility. It has been acknowledged that interventions to improve child health depend on the allocation of maternal time. For example Bentley et al. (1995) have shown that mothers' alter their usual activity patterns only slightly in response to acute diarrhea episodes in their children. This is due to the obvious constraints on caretaker's time.

Yet, the question about accessibility is far from being solved. Boerma and Baya (1990) present a puzzle from Kenya. According to their study, distance to the health center was a minor factor determining the utilization of a traditional healer but was important for clinic utilization. Along the same lines, working in Rwanda, Joanne Csete (1993) showed that accessibility of options is of great importance. She found both availability and cognitive issues to have an impact on the use of ORS. The work of Jocelyn Grace (1998) in Indonesia sums up all the findings about accessibility. She shows that the order of resort is based on the perception of appropriate care, time factor, money and inconvenience.

Sectors of care

The health-seeking setting was described earlier in terms of medical pluralism and the model of sectors of care. Medical pluralism as such has not been addressed in the present material but it is a backdrop in the majority of child health-seeking studies.

There were notions related to the sectors of health care in several studies, especially home care as opposed to care options outside home. It is supposed in many studies that home care causes delay to modern care. Stewart et al. (1994) emphasize that a visit to the health center is delayed because mothers use home medications, both indigenous and cosmopolitan. Freed and Freed (1990) looked at the health-seeking process and observed that there is a common pattern in recourse to biomedical aid in India. Similarly, Adetunji (1991) documents that mothers in Nigeria seek child care immediately when a child became sick. They start with home remedies. Outside help is sought only after three days if the condition of the child has deteriorated.

Additionally, empirical findings on child health-seeking have indicated that the quality of the services at different sectors play an important role. The findings of Baume et

al. (2000) link the delay of seeking care at Western facilities to quality issues. The authors have shown that in Zambia, the treatment of most childhood malaria cases starts at home, although the majority of cases are also seen in the formal health system. However, whether treated at home or taken to the health center, most children do not receive appropriate care according to the biomedical standards. Similarly, Hussain et al. (1997) reported from Pakistan that management at the community level is the biggest failure in the child health-seeking process.

In Bolivia, mothers stated that traditional healers were close by whereas medical doctors in remote rural locations were young and inexperienced (Hudelson et al. 1995). Nougara et al. (1989) argue that in Burkina Faso mothers are quality conscious: they use good services. Patricia Hudelson (1993) shows that mothers in Nicaragua are concerned and use medical manners that are perceived to be effective. Unfortunately the quality of biomedical services is assessed only in a few studies. Besides the affects of delay, the effectiveness of local services has not been documented.

Issues related to money

Finally, money related matters are part of factors effecting utilization and have been investigated in several studies. Findings point to the fact that mothers are open-minded consumers. Nichter and Nichter (1994) write that in the Philippines, mothers consult local healers based on a cost-benefit analysis. Bhardwaj and Paul (1986) communicate from Bangladesh that various kinds of practitioners are used for ailing children but poor people seldom seek the physician's intervention. Along the same lines, Yoder and Hornik (1996) report from six sites in Africa and Asia that household economics interfere with decision-making and compliance. Sarah E. Castle (1993) comments on the significance of ethnicity. She shows that mothers' responses to illness in children are due to real variations in women's socio-economic power, not ethnic differences.

5.3 Role of health-seeking in child health status

Finally, what is known about the outcome of child health-seeking? A few studies have tried to establish correlations or associations between child health-seeking and mortality. Olango and Aboud (1990) showed in Ethiopia that high mortality was associated with treatment by traditional healers. John Holian (1989) conducted his study in Mexican communities. He

was able to confirm “expected and significant” correlations between infant mortality and community background, medical access and health-care utilization variables. Additionally, there were “negligible” effects for access variables and substantial effects for the utilization measures. Babatunde A. Ahonsi (1995) examined determinants of child mortality in Nigeria. Included in the examination was the personal illness control (as indicated by tetanus vaccine, knowledge of ORS and spatial accessibility of health services). He showed that adoption of modern preventive child health measures was associated with better child survival.

A few studies have examined the health-seeking behavior of parents who have lost a child. Sutrisna et al. (1993) show in Indonesia that only 36% of childhood illness cases which were so severe that they result in a death, were brought to a modern health facility. Almost 80% of these homes where a child died were located within 2 kilometers of a health post and fewer than 10% were more than 3 kilometers away. Terra de Souza et al. (2000) used a verbal autopsy method in Brazil and interviewed the mothers of deceased infants. The authors were able to reduce the factors that contribute to most of the deaths into three groups:

1. delay in seeking biomedical care,
2. medical interventions reported as ineffective by the mothers,
3. delay in providing medical care to children who arrived at the hospital too late in the day to be scheduled for consultation.

Maternal schooling has been examined in several studies but not many of them have tried to establish associations between child health status and education.⁵⁷ Jacob Ayo Adetunji (1995) aimed at examining the fact that secondary school graduate mothers in Nigeria experienced a higher rate of infant mortality than mothers with less education. He ends up concluding that the economic hardship prevents most young mothers from translating their child-rearing ideas into reality. The basic reason for this is that these mothers are forced to work and leave the child for long hours with someone else. Joseph Uchudi (2001) shows that in Mali, besides biodemographic factors, the health-seeking behavior of the mother matters more than maternal education in explaining observed differences in neonatal mortality.

⁵⁷ In many studies, maternal education has been shown to be the most consistent and important determinant for the use of modern health care (Becker et al. 1993).

Additionally, it is known that in some locations treatment practices are definitely harmful if judged by biomedical criteria. An example of this is the practice of administering opium for children with diarrhea in North India (Kumar et al. 1985). Another diarrhea related example comes from Nigeria: mothers described how loose stools must be allowed to continue for some time before any treatment was applied. Amongst the major treatments that mothers recommended for diarrhea were prayers and locally purchased red capsules⁵⁸ (Adetunji 1991). However, the studies have not attempted to document the possible health effect.

One of the strategies to advance child health-seeking in developing countries has been to increase the number of modern health care facilities. Related to this, Elizabeth Frankenberg (1995) showed in Indonesia that adding a maternity clinic to a village decreases the odds of infant mortality by almost 15%. A doctor reduces the odds by about 2%.

Finally, as a sole exception in the material, de Silva et al. (2001) have assessed in Sri Lanka whether child health-seeking could explain the observed low mortality in a situation of poor economic performance and poor investment by the government on health care. The authors report a high level of care-seeking at modern health facilities and suggest that this is associated with low child mortality rate.

5.4 Conclusions: an abundance of inconsistent empirical findings

There is an abundance of empirical findings included in the previous literature on child health-seeking in developing countries. Most of the studies are conducted in Africa and thus the findings concern African locations. By necessity, a discussion of health-seeking behavior in relation to the youngest age group focuses on the caregivers and their behavior. This brings the mothers to the focus.

The utmost empirical finding, of course, is that there is an important link between behavior and child health. The most consistent finding thus far is related to the utilization of modern health care services: the utilization of biomedical services appears to promote child survival. Additionally, it is obvious that health-seeking practices may also be harmful for the child. Unfortunately not very many studies have analytically examined these issues.

Otherwise, empirical findings related to child health-seeking are rather inconsistent. As the studies on diarrhea illustrate, perceptions, knowledge and practices related to a

⁵⁸ According to the author, the capsules contained tetracycline and ampicillin (Adetunji 1991).

disease vary tremendously. Nonetheless, it is obvious that local ways of understanding may diverge considerably from the biomedical model. Knowing the apparently great variation of health-seeking practices, this may actually be the furthest that empirical findings have taken the current understanding about child health-seeking.

Similarly, questions related to accessibility, sectors of care and financial issues are not yet set. It is obvious that all of them may have an effect on child health-seeking. However, previous research has neither been able to settle on the role of these factors nor their relationship to each other.

PART 3: LUNGWENA STUDY

6 DESIGN OF THE FIELD STUDY

When I read what the white man has written of our customs, I laugh, for it is the custom of our people to lie as a matter of course to outsiders, especially the white man. We ask, "why does he want to know such personal things about us?"

A Tiv informant for Frank A. Salomone (1984)

The literature review above analyzed a set of child health-seeking studies conducted in developing countries. The examination indicated that taken as a whole, the research domain is not well established. Besides the central role granted to biomedicine, there is no common methodological⁵⁹ basis guiding child health-seeking studies.

The diversity of study designs has obvious indications for the field study in Lungwena. There is no commonly accepted format according to which data collection is to be realized nor is there theoretical support. Therefore, one might even say that no such phenomenon as child health-seeking existed in Lungwena. It was only defined by the study and during the study. Below, I will reflect the choices and commitments I made along the way. There were three major turning-points when the picture of child health-seeking was constructed: when the aims of the field study were set, when the interviewing strategy was created, and when analysis techniques were decided upon.

6.1 Aims of the study

In social research much of the rest depends on the initial definition of the study field and on how the key objects are conceptualized (Sayer 1992). As I explained in the introductory section, the present research project began with a concern for poor child health in Lungwena. Along with this, I concurrently observed the complicated nature of people's child health related behavior. A further tenet of the study was the almost palpable material poverty in the study area. These were also the themes that I explored in the contextual part of the present study and in the part containing discussion about the analytical approach.

Based on the above, the general aim of the Lungwena study is to bring these themes together and to make them more tangible by examining different aspects of child health-

⁵⁹ The term methodology refers to the theory of how research should proceed and also to the ways through which research questions may be addressed and materials analyzed (see Maynard (1998) for further discussion, see also the definition by Tim May in chapter 4).

seeking in the study area. During the research process I identified the following four sub-dimensions for the field study.

1. Child health problems and care conventions

While in Malawi, preliminary discussions with various people offered a wealth of insights into child health problems and care conventions. Findings from literature further supported the need to explore child health related behavior as an important determinant of child survival. Therefore, an obvious aim for the field study was to examine more systematically which health conditions were acknowledged as problematic and what kind of therapy people commonly used.

2. Lay therapy management⁶⁰

In Malawi, people often talked about the roles of different family members in every day life. At times of illness people also had certain functions. Chapter 3.3 above established that lay people manage most of the illness cases globally. A therapy management group consisting of relatives and other lay people is responsible for decisions concerning help seeking for illnesses. Family members and other lay people become especially important in childhood illness cases because children do not make decisions or speak for themselves.⁶¹

Decision-making related to childhood illnesses has not been studied before in Lungwena. Based on previous literature on matrilineal communities I presupposed that the mother's kin plays an essential role. Lay people's accounts of childhood illness cases communicated that a number of relatives were indeed involved. Along these lines, the second aim for the Lungwena study was to further investigate the spectrum of people who participate in child health-seeking and to examine the dynamics of decision making within extended families.

3. Economic environment

Lungwena appeared as an extremely impoverished area. People spontaneously talked about the financial issues substantially restricting their lives and also guiding childcare. In chapter 2.2.2 I described two findings that previous research has established between economy and health. On the one hand, there is a firm connection

⁶⁰ John Janzen (1978) introduced the concept lay therapy management in his book *The Quest for Therapy in Lower Zaire*.

⁶¹ However, a line of sociological research conducted in the industrialized countries has emphasized the role of children not only as objects but also subject. Examples of this approach may be found in Bush et al. 1996.

between economic indicators and child survival. On the other hand, in some locations this link has been overcome and child survival rates are lower than what economic indicators suggest.

Based on this, the third study theme pertains to economic matters. As I will explain in more detail later on, in the course of the survey interviews, information about respondent's assets was acquired. This information made it possible to describe people's economic living standard in the area. I also used it in the analysis for factors associated with childhood mortality.

4. Association of health-seeking and childhood mortality

The literature review above showed that the association between child health-seeking and child mortality has been often used as a background assumption but rarely examined in previous studies. Therefore, one challenge of the present study is to critically assess if the data allows examination of childhood mortality and child health-seeking.

6.2 Accessibility of data

A basic starting point for the field study was the realization that there was no direct access to information about child health related behavior. One might rather say that there was a linguistic, cultural, and perhaps even racial barrier between the local people and myself as a researcher.

Although specifically writing about ethnography, Hammersley and Atkinson (1996) touch on the issue of accessibility in a way which is more generally valid for social science study designs. According to them, there are two aspects in accessibility: practical or physical issues, and another, more delicate aspect that they call appropriateness. The authors use examples to show that access is not simply a practical matter, a question of physical presence or absence. In many settings, while physical presence is not in itself a problem, appropriate activity may be.

If one first looks at the practical side of accessibility in Lungwena, there were basically two feasible options for acquiring information related to child health-seeking: in literature covering methods of social research these are customarily discussed under observational techniques and interviewing (see for example May 1997). Both of these methods have their strengths and weaknesses. However, since children fall ill relatively

seldom⁶², I considered observational data on child health-seeking, although not impossible to obtain, not viable in this investigation. Thus, I opted for the latter and interviewed various people by myself and with the help of research assistants, as I will describe below.

The appropriateness of an investigation method is not easy to determine. Hammersley and Atkinson (1996) suggest that it can be learned from the problems involved in making contact with people as well as from how people respond to the researcher's approaches. While in Lungwena, I had in my mind three previous experiences reported in anthropological literature. Firstly, I was aware of J. Clyde Mitchell's experiences from the latter part of 1940s. He worked as an anthropologist in Yao villages not far away from Lungwena. Mitchell described very vividly his "entry in the field": Villagers would slip into the bush or refuse to answer his questions. There were many rumors about his presence in the villages. Therefore he ended up spending his early months in idleness. (Mitchell 1956)

The second example is a classic in anthropological literature, a transliteration of an interview with a Nuer informant by E. E. Evans-Pritchard in then Anglo-Egyptian Sudan, first published in 1940 (Evans-Pritchard 1969). In order to work out an interview presupposes a set of roles, rules for turn-taking, canons for introducing new topics and other speech events (Briggs 1986). The book shows brilliantly that the Nuer informant does not know what it is to be interviewed. Therefore, there was a total disagreement between the interviewer and the interviewee about the course of the encounter.

The third example comes from Frank A. Salomone (1984) in Nigeria. The reply of a Tiv informant is reprinted at the beginning of this chapter. The informant refers to the custom of lying to white people who query about sensitive issues. My initial impression in Lungwena was that people took the interviews rather seriously and did not intend to lie in the common sense of the word. I will come back to this issue in the chapter discussing analysis of field data.

Times had changed and apart from language problems, it was easy to socialize with people at the health center and in the villages. Villagers did not flee even if nowadays white people are still a rarity in the area. The general reaction towards my family and I was immense curiosity and politeness possibly mixed with some suspicion. People explained that during the previous presidency strange people were not to be trusted because they could be spying for information for the use of the people in political power and this could

⁶² In a study belonging to the Lungwena Child Survival Study it has been shown that infants in the study area suffered 3.8 illness episodes during the first year of life. On average, they were ill 2.7 days per month which corresponds to 32 days during the first year of life. (Vaahtera et al. 2000)

cause trouble in the area. Strangers were also suspected to be representatives of the police force or tax collecting officials.

I was also involved in a school health education program⁶³ and therefore got to meet many people at the school, at the health center and in the villages and people got used to seeing me around. These encounters provided me with general confidence about the possibility of successfully interviewing people. Because of these other activities, however, I was closely linked to the school and the health center in the minds of the local people. I will come back to this issue while discussing interpretation of the results.

Furthermore, throughout the study the questions were about hypothetical illness cases. For example, “if your child fell down with fever, what would you do?” Actual illness cases were not questioned or observed. This was a deliberate choice based on the assumption that it would allow the respondents to speak up freely because they would not have to worry about their answer judged to be “correct” or “incorrect” judged by my criteria.

6.3 Realization of data collection: interweaving the interview stages

Above, I have described that just like the majority of the studies included in the literature review, this study began with a typical concern about children's poor health status: the focus was on health-seeking behavior as a possible component of high child mortality. Before long however, I realized that I did not actually know what the most important constituents of child health related behavior were in Lungwena. At the beginning, when I approached Malawian people with my questions about the treatment of ailing children, I only had biomedically-derived concepts at my disposal. I tried to elicit translations and interpretations from various people. As expected, in many cases, peoples' ideas about the nature of childhood illnesses did not relate to biomedical ideas at all. Responses also revealed that besides immediate illness related factors, practices connected to child health were affected by a complex social and economic orders. This led to an epistemological dilemma: should I construct a picture of child health-seeking with factors that play a role according to biomedicine, or should I direct my attention to the factors that people themselves talked about? Basically, the question was about power relationships: whose

⁶³ For additional information of the school health program, see Bilharzia screening and treatment at Lungwena Full Primary School (1994), an unpublished report. by Ulla and Per Ashorn, Bilharzia Research Team and The Lungwena Full Primary School Health Club.

definition of child-health seeking counts? I decided to go on with negotiations about ways to combine these two perspectives, to see how child health-seeking is displayed at the crossroads of biomedical and local perspectives.

Allan Bryman has suggested that if a researcher is faced with a puzzle, the interweaving of data sets is a reasonable solution. According to this principle, data sets that are collected during successive stages are utilized to stimulate new issues for further data to be collected. In practice, this means that during the study process there is movement back and forth between hypotheses, data collection and analysis. (Bryman 1992) Child health-seeking in Lungwena offered a challenging puzzle indeed.

It was against this background that I designed fieldwork that combined different interview techniques. Below, I will describe in more detail the study process that developed from informant interviews, to focus group interviews and survey interviews.

Informant interviews

The major first steps in the process that aimed to puzzle out the study questions were key informant interviews. I lived in the area for one and a half years before the formal onset of the study. Informal interviews, often conversations with Malawians and expatriates preceded a more structured data collection phase. I met with people on different occasions and talked with them informally about interesting themes. I also made more formal appointments with a few people and told them about my study interests and asked for their help. Amongst informants were people who were connected to the Lungwena health center, traditional birth attendants, schoolteachers, four traditional healers who employed different types of healing practices, and of course, lay people.

One of the most valuable informants was a woman of about 25 years old. She lived in one of the villages nearby the health center with her family and children. She had spent some time in one of the neighboring countries and thus, to some extent, had developed an outsider's perspective on the way of living at Lungwena. Typically, she would introduce a new topic by saying: "people here in Lungwena think like this". She spoke of general issues concerning relationships between men and women, children and parents and different generations. She also knew a lot about local healing practices. Her advice about the local courtesy code was of great value. At later stages of the data collection process I returned to her (and to some other informants, as well) several times with my questions.

I conducted key informant interviews over a long time-span so that there was time to analyze the accounts in between the events. Interviews were open-ended and as

unstructured as possible so that I intentionally guided the discussion very little. However, from one interview to another, I tried to raise more accurate themes to complement the knowledge that I had acquired previously.

According to literature on interview methods this kind of unstructured interview is at the core of qualitative techniques. Besides providing the ability to challenge the preconceptions of the researcher, they are said to allow people to draw upon ideas and meanings that they are familiar with. Therefore they are assumed to provide a greater understanding of the subject's point of view. (Holstein and Gubrium 1995, May 1997)

Focus Group interviews

Key informant interviews have been criticized for their possible bias. This does not refer to bias in statistical sense but to the fact that such occasions are very dependent on linguistic, personal, technical and interpretative skills of both the interviewer and the interviewee (Manderson and Aaby 1992). Therefore, the following item on the interview itinerary was to organize Focus Group interviews with mothers. The rationale behind this was that such interviews have successfully been used as a tool for investigating group norms and dynamics around the issues of interest. (Casley and Lury 1987, Khan and Manderson 1993, May 1997)

The informants recommended that before summoning the meetings, one should go to the village chiefs and ask for a formal permission. I chose two villages and went to greet the chiefs. While in the village, I was seated on the sole chair and formally addressed by the chief and the advisors. Both of the chiefs had a very encouraging attitude when they heard about the subject.

After the courtesy calls four focus group meetings were summoned with the help of the chiefs. 8-12 discussants participated in each meeting. Again, the informants advised me that it was not proper for different generations to discuss their matters freely. Therefore, younger and older mothers attended separate groups. In two of the meetings younger women were invited and in the remaining two there were older participants. While women themselves knew who was "older" and who was "younger", I did not set an age limit nor could I estimate very well the age of the women who arrived.

At an appointed time, the facilitator, assistants and I walked to the village.⁶⁴ (I parked the car on the outskirts because it always caused much fussing when a motor vehicle

⁶⁴The study team will be described below.

arrived in a village. Also, I was not sure whether it was suitable for a woman to drive.) Some of the women were already sitting on the mats in the shadow of a big tree, the rest were gradually arriving. Because there were not many watches in the villages, it was not possible for the participants to know the exact time.

For the occasion discussants, the conductor and two assistants taking notes sat on the mat. This time, because I had visited the villages earlier, I was also allowed to sit on the mat with the tape recorder. Discussions lasted for about an hour and afterwards we offered the women some soft drinks that I had brought with me. I also gave each participant a tablet of common soap to show my appreciation.

The qualitative component of the study, which includes key informant interviews and focus group interviews, had two practical aims: besides providing information about child health-seeking practices the interviews aimed at developing a questionnaire for further interviews. In this they proved very valuable. They indicated the types of questions that needed to be asked and revealed the range of typical answers (see Newby et al. 1998 for similar role of Focus Group discussions). Additionally, Focus Group discussions were translated verbatim and from them I could draw on the language and terminology that women would use when talking about childhood illnesses. To cross check the information, discussions were taped and transcribed by a Yao speaking local teacher. From this material I obtained a general picture of common childhood illnesses, preliminary translation for diagnoses and an outline of decision-making dynamics within the extended families. The differences in the wording of the assistants and the transcription showed interesting views on the way names of different illnesses were translated and recognized.

Furthermore, Focus Group meetings offered a learning and working opportunity for the assistants and also for me. Two of the assistants were taking notes during each meeting. After the meeting we went through the material and discussed how these fitted into the general aims of the study. Finally, by observing mothers during the group interviews I could ensure that the themes that were discussed and the information that was collected were meaningful and interesting to them.

Survey interviews

The theory of survey interviews is that each person is asked the same question in the same way so that any differences between answers are held to be real and not the result of the interview situation (May 1997). Survey interviews may be used to assess the strength,

prevalence or frequency of certain types of responses. Additionally, survey data can relate diverse factors (Pelto and Pelto 1996).

After a preliminary analysis of Focus Group discussions I drafted a questionnaire. It included both closed and open-ended questions. In the former case, the answers were pre-coded. In the latter case, questions were specified but the interviewers were allowed more space for clarification and elaboration of the answers. These types of interviews are said to allow people to answer more on their own terms than the standardized interview, but still provide a greater structure for comparability over the unstructured Focus Group interviews (adopted from May 1997).

The questionnaire was first translated from English to Yao, and then back-translated. Again, several people were involved in the process in order to get different viewpoints. There was a native Yao midwife, a Yao man who had worked as an informant for the translation work of the Old Testament for missionaries⁶⁵ and a Yao speaking schoolteacher. The translators did not know each other.

The next step was to pretest the questionnaires and the interviewing skills of the assistants. Most parts of the questionnaire appeared to work out fine and only a few sentences needed rephrasing. Research assistants were able to ask the questions in a natural manner and the mothers interviewed had no difficulties in answering them. The questionnaire in its final form is included as appendix 3.

Unfortunately, questions that were included for collecting demographic data (number of children and their survivorship) proved to be difficult. They needed to be reformulated several times. In the end, the total number of children and whether a child was alive or dead was cleared up child-by-child and double checked with another question. The difficulty was partly caused by linguistic problems and partly by the fact that older women especially were not used to expressing things in a numeric manner.

In its final form the questionnaire was rather long, consisting of 21 pages of both open ended and pre-coded questions. Besides the demographic data, questions touched on knowledge about childhood illnesses, their treatment, prevention and causation as well as decision-making in childhood illness cases. Additionally, there were questions about the value of children, family relationships and the economic status of family members.

Once again, I went to greet the chiefs in four more villages in order to get their permission for the survey interviews. In one of the four villages the chief was a woman in her fifties; other chiefs were older men. There were no difficulties in getting their support.

⁶⁵ During the time I lived in Malawi the Yao vernacular was only being developed as a written language. The Old Testament was one of the first written texts in Yao.

After the formal permission, assistants entered the villages in pairs and did two interviews in a day: one of the assistants led the interview in the morning, the other one in the afternoon. The responsibility of the more passive one was to take care of tape recording and back up the main interviewer if there were any misunderstandings or difficulties. The interviews lasted approximately an hour. Walking to the village of interview and back took easily two hours.

Between January and June 1995, 204 survey interviews were conducted in six out of the total of 22 villages in the area. Most of the interviews took place in Talia (n = 73) and Fowo (n = 73), two of the biggest villages in the area. Additional interviews were conducted in smaller villages: Kapinjiri (n = 7), Kwilasya (n = 15), Mwanjati (n = 11), Ntumbula (n = 12), Masyasya (n = 8) and Mbale (n = 5). I later excluded one of the interviews from the material because after the interview took place, the respondent said that she did not have any children and she was only pregnant. At first she talked a child, but meant the one she was pregnant with. Taken together, the survey material that will be used for description and analysis consists of 203 interviews.⁶⁶ These mothers reported 986 children born to them. Out of these children, 670 were alive at the time of the interviews and 316 had died.

The survey sample was mainly selected randomly. In all of these villages there was a footpath splitting the area with houses on both sides of it. I agreed with the assistants the number of houses they would pass before asking for permission to conduct an interview. The number varied between 1 to 10 and was different every week.

Because Malawi's population pyramid rests heavily on the youngest age groups, random sampling provided mainly young respondents. To avoid over-representation of the youngest age group, some 20 older women were chosen from under-5 clinics. This was also done at random based on the health center files. Data of older women is valuable for the study because they usually have more children whose follow-up period is longer than the young women. All things considered, the sample is statistically representative of the population. In the light of the discussions I had with people in Lungwena, the sample also represents the way of thinking about health issues in childhood.

Survey interviews were not translated verbatim. There were two reasons for this. The main reason was that Yao is a written language. Therefore, the analysis of the interviews was more of a negotiation process about meanings between an English speaking

⁶⁶ These numbers exclude preliminary survey interviews. However, as I explained above, demographic questions included in the questionnaire were rephrased after 39 interviews were conducted. Therefore, data from only 164 interviews is utilized in analytical part of the study (chapter 13).

person and a Yao speaking person than a question of translation. It was not feasible to translate the interviews sentence by sentence. Another obstacle for translation was the great length and number of interviews. Additionally, I did not intend to conduct a linguistic analysis based on this material.

Finally, men of the families were not included in the interviews because, at that point, I already knew that women carried the main responsibility for child health. Men's roles were mediated through women's accounts. However, men's economic position and responsibilities were enquired about because there seemed to be unanimity among people that men were in charge of cash money. Additionally, female research assistants would not have been able to conduct interviews with the men.

Study team

Various people contributed to the collection of field data as members of the study team. At the early stages of the fieldwork, when I was only having informal discussions with people, I had already started searching for assistants for fieldwork. The general agreement was that interviewers who were going to meet with women had to be women themselves. However, there were no well-educated or experienced women available in the area. Still, based on my own encounters, I preferred local women knowing that the training period had to be relatively long.

Four local young women agreed to join the team. All of them had children of their own. They had completed secondary education and therefore understood English but were not very fluent speakers. However, the fact that we had to use a lot of time explaining linguistic issues proved to be an advantage for the study.

Focus Group meetings were carried out under the guidance of a middle-aged woman who worked as a community health nurse in a health facility. She had plenty of experience in conducting health education sessions in the villages. Furthermore, she was Yao and spoke her native tongue and English fluently. She also mastered local illness terminology and, because of her nursing background, was familiar with biomedical terminology as well. She directed the discussions in an informal but structured manner allowing ideas to evolve with the knowledge gained.

My counterpart during the training period was a nurse who lived in the area. Therefore, all of the assistants knew her previously. She was a little older and more educated than the assistants and this seemed to make it easy for her to give instructions to them. We had sessions sitting together on a straw mat discussing general aims of the study,

note taking techniques and interviewing practices. We also talked about the different child health perceptions all of us had.

During the pre-testing of the questionnaire one more member joined the team. She was an elderly Yao woman who had gained experience working for several health projects and had mastered perfect English and Yao. She listened to the survey interviews from the tapes and translated where needed. I listened to most of the interviews with her, posed questions and made notes when I heard interesting bits of information (at that time I could understand the main lines of Yao language discussion).

6.4 Reading the material

The above described interviewing process provided a set of material rich with knowledge, opinions and expressions related to child health-seeking in Lungwena. Next, I had to face the question about ways in which to read the material. There were, of course, practical questions to be solved. Below, however, I will have a look at the epistemological commitments and confines of the present data set.

Starting point: epistemological bifurcation

Interviews vary in several respects. A conventional way to approach this variety is to frame interviews in the discourse of dualism. Examples of this “polarity principle”⁶⁷ are dichotomies based on the number of interviewees (informant interviews vs. large scale surveys), the level of standardization (structured vs. unstructured), or interviewing technique (face-to-face vs. telephone interviews). However, the dualism that is most often used to characterize interview material is based on quantitative-qualitative divide. In order to get started with the epistemological examination, I shall look at the divide briefly.

The “polarity principle” that is adopted in table 17 below uses the quantitative-qualitative divide as a starting point but goes beyond that by placing interviews into two broad genres: there is the classical interview tradition and the more recent challenges to it. This bifurcation aims to understand data in terms of knowledge. Before examining the table in more detail, it must be emphasized that the waters are far more muddy than this: the table depicts only a very rough picture of the epistemological field. Despite its shortcomings, the

⁶⁷ The term is from Ray Pawson (1996).

division serves as the basis for examining a multi-method data set by indicating the key components in theory behind interviewing.

The classical interview tradition, pictured in the left panel of the table, is based on positivism, the prime component of the modernist program. The ambition of the modernist project is to apply science to achieve progressive control over natural and social forces. The major tenets of positivism include the quest for universal laws and neutrality of observations. (Hammersley and Atkinson 1996, Halfpenny 2001) Within the classical traditions, interviews are considered as a pipeline for transmitting knowledge about how things are or what people do (Holstein and Gubrium 1995, Pawson 1996, May 1997). The concern is with maximizing the flow of valid, reliable information and minimizing distortions. Quantitative data collection methods, especially surveys, are by and large associated with this approach. The key issue in surveys is how to ask the questions properly. (Holstein and Gubrium 1995, May 1997)

Table 17. Methodological bifurcation of interviews.

	The classical tradition: interview as a source ⁶⁸	The more recent challenge: interview as a topic	References
Theoretical framework	positivism as part of the modern project	relativism and various strands of postmodern social theory	Halfpenny 2001, 381, Hammersley and Atkinson 1996, 156, May 1997, 15–16
Epistemological assumptions ⁶⁹	interview is a pipeline to reality, assumes a link between person's account of an action and the action	interview is a social encounter, does not aim at examining "reality"	Holstein and Gubrium 1995, 2–4, May 1997, 129
Analytical status of data	interview as source, focus on knowledge outside the interview	interview as a topic, focus on regularities and features of the account	May 1997, 128
Assumptions related to people	passive objects responding to stimulus, created by underlying structures and environment, not engaged in the production of knowledge	people as active subjects who give meaning to their environment, interact with interviewer	Holstein and Gubrium 1995, 8, May 1997, 12–13
Relationship to data	measurable facts exist	no facts beyond people's perceptions and interpretations	Bryman 1993, 107, Hammersley 1992, 50, Pawson 1996, 299
Research approach	aims at explaining causalities and associations	people create the social world, leads to relativism	Bryman 1993, 107, Hammersley 1992, 50, Pawson 1996, 299
Data collection method	quantitative research, structured interviews, especially surveys	qualitative research techniques such as unstructured interviews	Pawson 1996, 299
Methodological focus	reliability and validity	search for authentic account	Holstein and Gubrium 1995, 9

⁶⁸ The term is from Briggs 1986.

⁶⁹ Epistemology refers to the study or theory of the limits of knowledge. Epistemology asks the question “how do we know what we know?”. (Hirsch et al. 1988)

Today, positivism has become little more than a term of abuse among social scientists. A number of questions about the sheer possibility of collecting knowledge in the manner positivism presupposes has been raised. (Holstein and Gubrium 1995, Hammersley and Atkinson 1996). Positivism has been challenged from several directions that operate under the shield of postmodernism (as opposed to the connection between modernism and positivism).

Postmodern research is summarized in the right panel of the above table. It has lost faith in the ability of science to provide us with truth about reality. Therefore, interviews are no longer considered as neutral actions. In view of that, facts and values cannot (and should not) be separated (Hafpenny 2001). On the contrary, interviews are treated as social encounters and a productive site for reportable knowledge. They reveal how people present themselves in answering questions. (Holstein and Gubrium 1995). Cognitive theories provide the conceptual backdrop for many, though not all, studies belonging to this track (Garro 1998). Typically data collection methods that are labeled as qualitative are associated with this approach (Pawson 1996).

An issue that clearly separates the different traditions by causing fundamental epistemological disparity, materializes in the explanatory scope allowed for data.⁷⁰ The table above shows that the classical interview tradition is embedded in a realist epistemology in the sense of assuming that (usually quantitative) interview accounts correspond to how things really are. By contrast, the qualitative method does not aim at presenting facts from "reality" but establishes a link between the interview and the environment where interviewing takes place, thus emphasizing uniqueness of the event.

Rethinking differences: building epistemological bridges

In the present material survey interviews belong to the quantitative tradition and the informant interviews and focus group interviews to the qualitative tradition. How does one

⁷⁰ Even though terminology may be different, several authors share the idea of interviews having this dual status. In addition to Hammersley and Atkinson these authors include:

- Charles L. Briggs (1986) who writes interviews as a channel and as a social situation,
- James A. Holstein and Jaber F. Gubrium (1995) write about interviews as a pipeline and a social encounter, yet emphasizing that all interviews are first and foremost social encounters, and
- Tim May (1997) writes about interviews not being simply “accurate” or “distorted”, but that they also provide the researcher the means of analyzing the way in which people consider events and relationships and the reasons they offer for doing so.

build bridges beyond the above-described bifurcation? At this point, I am especially interested in the achievable epistemological positions for reading the data.

The body of texts which attests to the existence of separate and opposing interview genres is much larger than the body of literature which instructs researchers in the conduct of multi-method research. Research projects utilizing a mix of methods are usually described as difficult but enlightening efforts. (Laurie 1992, Manderbacka and Jylhä 2000)

On a purely empirical level it may be plausibly argued that the quantitative-qualitative divide is not a real one. It is not difficult to demonstrate that all interviews yield both quantitative and qualitative data, numbers and words. Data may also be analyzed by a variety of methods. (Brannen 1992, Bullock et al. 1992, Hammersley 1992, Hentschel 1999, Töttö 1999) An example of the ambiguity between words and numbers are terms such as “regularly”, “frequently”, “often”, “sometimes”, “generally”, “typically” etc. that are used both in quantitative and qualitative texts (Hammersley 1992). This is what Alan Bryman (1998) calls the technical version of the debate: the crucial question is whether there is an appropriate fit between the research problem and the method.

On epistemological level the picture gets more complicated. Within methodology literature, just like in the table above, epistemology and methods are usually depicted as tightly interrelated.⁷¹ Once examined like this, it seems clear enough that the theoretical frameworks of different interview genres cannot come together – and should be kept separate. (Brannen 1992, Bryman 1998) For interview material collected with a combination of methods this poses a challenge.

Yet, it has been maintained that the divide between qualitative and quantitative approaches is neither a very fruitful one nor irreconcilable. The division into two research genres has been blamed for being too simplistic because the diversity of epistemologies cannot be encapsulated within two (or, for that matter, three, four or more) paradigms (Hammersley 1992). Furthermore, it has been argued that the connection between epistemology and research method is nothing other than a convention (Bryman 1998).

Different epistemological backgrounds of materials gained with a mix of methods actualize at the stage of analysis. In the literature I have found two types of strategies. Firstly, advocates of multi-method designs have cast doubt upon the view that the use of a certain data collection technique necessarily means that a particular epistemological position is adopted. In other words, the epistemological connection is straightforwardly denied. Secondly, supporters of multi-method design have asked whether one

⁷¹ Grounded Theory is a major exception. It is formed on the assumption that the researcher moves backwards and forwards between data collection and the elaboration of theory. (Bryman 1992)

epistemological position exclusively rules out other positions. They have suggested that several epistemological positions in relation to one set of data are possible. (Brannen 1992, Pawson 1996, Hentschel 1999)

An example of the first line of arguments is offered by Hammersley and Atkinson (1996). According to them, all interviews should predominantly be treated as social accounts. On top of this, all accounts can be analyzed from two angles:

- as a source of information about events, and
- as a topic in its own rights revealing the perspectives and discursive practices of those who produced them.

The researcher may, however, have one or other concern predominantly in mind (Hammersley and Atkinson 1996). Thus, the link between the way of interviewing and epistemological commitment is breached.

A contradictory example is drawn from Kirsti Malterud (2001). She writes that in multi-method research designs, analysis should acknowledge and take use of the different nature of quantitative and qualitative approach. Also Pertti Töttö (1999) has called this the “division of labor” between quantitative and qualitative methods. According to him, the questions asked and answered by quantitative and qualitative methods are of a different nature. Qualitative methods answer “what” and “how” questions; quantitative methods are suitable for finding out “how much” and “why”. Similarly, Julia Brannen (1992) writes about the need to carefully reflect and examine whether findings based on different methods are at odds or conflict with one another. According to her, differences between data sets are likely to be as illuminating as their points of similarity. In other words, these authors suggest that each data set is constituted by the method, which is used to elicit it. Therefore different data sets should be engaged in a dialogue but not mingled. What Kirsti Malterud suggests is secondary analysis, the aggregation of findings from different data sets. She is, however, very critical of a complete integration of quantitative and qualitative material, for example recording variables from quantitative material. As a further instruction she states that the secondary analysis should be conducted in such a manner that contradictory findings can be handled without having to discard one aspect of results. (Malterud 2001)

Julia Brannen (1992) has used the term complementarity to describe the different roles that are allotted for separate data sets. Essential for the complementarity principle is that each methodology is used in relation to a different research problem or different aspect of a research problem. Thus different data sets do not add up to some rounded unity but enlighten different sides of a research question (Brannen 1992, Malterud 2001). Historically, before positivism and the survey era, quantitative and qualitative techniques

were used side by side and considered as complementary (Hammersley and Atkinson 1996).

Different data sets may also be considered in terms of integration. The integration approach comes close to positivist thinking by recommending more than one method to avoid error while conducting research on a study object. The context within which the integration of quantitative and qualitative research is most often encountered is triangulation (Hammersley 1992). In the original view of triangulation it was assumed that several approaches focusing on the same research question would yield consistent data sets that were to be integrated. Thus, the idea about integration presumes a single unitary picture of what is assumed to be “reality”. Triangulation was seen to increase the internal validity of the data and enhance the degree of confidence in them because of the multiple approaches to data collection (Brannen 1992, Hammersley 1992).

Despite the above, there is still much controversy as to the conditions under which a combination of methods from different genres is acceptable and how the analysis should be done. Neither of the above strategies is without problems and discussion concerning epistemological positions continues. A practical solution that has been suggested is transparency in study design. Using a mix of methods demands that the researcher specifies as precisely as possible the particular aims of each method and the nature of data that is expected to result. (Brannen 1992) Both the strengths and the weaknesses of different methods of interviewing and approaches to their analysis should be reflected (Hammersley 1992, May 1997).

Analytical position of Lungwena material

How does the Lungwena material fit into the above epistemological conundrum? Besides conventional theoretical endorsement, I had no reason to treat the different interview materials according to their background epistemological genres. To the contrary, the initial informant interviews alone offered a lot of evidence undermining the positivism-relativism connection.

Rather than univocal, it appeared that there were different voices within the very same interview account. Some parts of interviews obviously related directly back to the observable context in Lungwena. Examples of this are descriptions about material living conditions and numbers of children in the families. On the other hand, certain parts of interviews dealt with issues that could not be verified by comparing to “reality”: people shared their knowledge, beliefs, hopes and even uncertainties with me. On these grounds, I

acknowledged the usefulness of the social theory related to the distinct interview genres only as a resource of thinking. However, I started searching for epistemological positions located in the middle ground. The cornerstone epistemological assumption that I adopted for reading the data was that all interview accounts demand reflection. One of the aspects to be reflected on is the explanatory scope of the data, i.e. the relationship between an account and “reality”.

In the light of the above, what are the conclusions from the negotiations concerning the limits of knowledge in the present study? In order to comply with the aims, the data necessitates two types of analytical positions and two analytical strategies, as well.

Firstly, in a great majority of the questions, I have bracketed out truth and use the material as a lens on the society, revealing the perspectives and discursive practices of those who produced them. Analysis treats the responses as independent verbal expressions rather than a realistic account about the behaviors they are intended to represent. The materials were analyzed to uncover common themes, answering conventions, knowledge, attitudes and opinions. For this purpose, key informant interviews and Focus Group interviews were coded. In this mode of reading, the role of survey materials is to indicate the relative magnitude of the findings. Therefore, they were analyzed for percentages and frequencies.

Secondly, a few questions aimed at finding out how things were in Lungwena. Questions aimed at this assignment goal were included in the survey questionnaire. As described above, interviews were conducted according to the rules of survey in order to ensure reliability and representativeness of the data. In this part, key informant interviews and Focus Group interviews served as an instrument for developing questions for the survey questionnaire. This material was also useful also for interpretation and clarification of the survey results.

It is important to remark, however, that the above positions do not correspond with quantitative-qualitative divide. During the preliminary analysis of focus group materials I, for example, counted certain countable things such as number of times certain illnesses were mentioned and number of different relatives who participated in the decision making with in the extended families. Besides traditional quantitative analysis, survey material also renders the opportunity to spot recurring themes. Additionally, I have compared quantitative and qualitative interview accounts and especially looked for things that women left unsaid.

Rather than emphasizing the truth-value of the materials, the design derives from interaction between local knowledge and biomedical knowledge. In practice the above strategy has meant that I have used the set of materials for different purposes. Firstly, the

interviews have served both in analytical and descriptive parts of the study. Secondly, I have used the very same materials for drawing upon a mother's way of perceiving childhood health problems and for a biomedical assessment of child health related issues.

Finally, it is worth noting that empirical literature on child health-seeking offers justification for different epistemological positions. An example that operates within the “pipeline to reality” genre is from Delgado et al. (1994) who write that “responses of rural dwellers to questions about hypothetical episodes have been shown to have a high correlation with their actual health seeking behavior”. A contradictory example is derived from Roisin Pill (1991) who ends up claiming that “making statements about health is a special form of behavior and needs to be understood as the product of the total context where it occurs”. Thus, instead of assuming that what people say is equivalent to what they do, attention should be focused on the ideas, norms and bits of knowledge that are invoked in connection with health behavior.

6.5 Conclusions: child health-seeking at the crossroads of knowledge

A picture of child health-seeking as a knowable study subject was created throughout the study process. Above, I have discussed the three major turning points in the process that may be singled out. First, I explained how the aims of the study were identified, next the interview itinerary, and finally the analysis strategy. To sum up the design, the epistemological intent of the study was to examine child health-seeking in Lungwena as a versatile, multi-faceted phenomena. The role of different data collection phases was to bring forth different aspects of child health-seeking.

Against the original intent I have given quite a few pages for discussing epistemological issues related to the present material. The key question about the study design concerns commitments related to a combination of qualitative and quantitative methods with special reference to different perceptions of “reality”. At the stake here is the relationship between a verbal statement about the world and people's ordinary daily practices including child health-seeking within extended families.

The length of this chapter may be justified by the central role of epistemology. According to Julia Brannen (1992), the major advantage of reflecting on the epistemologies behind data sets is that it guards against creeping pragmatism and an absence of theoretical perspective. These considerations also help along the uneasy shuttling between epistemological and technical levels of discourse and research (Bryman 1993). According to Holstein and Gubrium (1995), it is important “not to lose track of what is being asked about and what is being conveyed by respondents”.

7 STUDY SITE

The site for the field study was Lungwena, a rural area in Southern Malawi. There were 22 villages scattered along the plain in December 1993. Villages varied in size from 150 to 300 households and about 16 500 inhabitants in a total of 4 200 households⁷² were living in these villages. The number of children under-five years old in the area was approximately 3500, which is 21% of the population.⁷³

7.1 Location

The distance from Lungwena to Lilongwe, the national capital, is about 350 kilometers. Blantyre, the commercial capital and the biggest town in the country is a little closer, about 300 kilometers away. A trip to these places on *matollah*, a pick up truck that is used for public transportation, took practically a whole day.

Mangochi, the district capital, is the nearest town at a distance of about 30 kilometers. A travel from Mangochi to Lungwena starts on an old tarmac road with plenty of potholes. After a few kilometers it turns into a single-lane dirt road that follows Lake Malawi's shoreline northwards and finally hits the Mozambiquean border after passing Lungwena. Half way there is Malindi, a busy village that has gained some of its facilities because it used to serve as a base for an Anglican mission. Among other amenities there is a secondary school and a private hospital. From Malindi onwards the road gets even narrower and many of the bridges are missing planks. The Lungwena area is made even more remote by the fact that there is no regular public transport on the road. During the rainy season floods cut off the road regularly.

The road splits Lungwena leaving villages scattered on both sides. The area is about 20 kilometers long and a few kilometers wide (about 100 km²). Routes leading to the main road are better described as footpaths: they are passable only by pedestrians, bicycles and four-wheel-drive vehicles. During the rains even walking becomes difficult in the slippery soil.

Electricity wires end in Malindi. In Lungwena there is only a generator for lights and a refrigerator at the health center. Firewood is the only source of energy for the local people

⁷² Terminology related to family formation is discussed later in this chapter.

⁷³ The data is derived from Lungwena Demographic and Health Survey, which is an unpublished report.

in the study area. It is largely derived from the naturally forested area lying towards the escarpment. The nearest telephone is in Malindi as well. News reaches Lungwena mainly by word of mouth. Other means of communication are rare. Quite a few people have radios but often they cannot afford to buy batteries. Television program production started in Malawi only in 1995. There were no TV sets in the study area. Similarly, no newspapers or magazines were sold there.

However, people had frequent contacts with outside areas. Pick-up trucks carried passengers and goods between Lungwena and Mangochi. Vehicles left Lungwena early in the mornings and returned some time in the evening before darkness. Most of the passengers on the trucks were men but some women also climbed into the back of the old vehicles. Many men also migrated to Malawian towns and to South Africa in order to find work. These travelers mostly formed the information link between Lungwena and outside world.

Geographically, Lungwena is a narrow plateau in the African Rift Valley between the escarpment and the Southeastern shore of Lake Malawi. The landscape is flat and low-lying; only a little higher than Lake Malawi surface. The land is covered with bushy vegetation. Plant growth is essentially related to rainfall. In ordinary years the hot and dry season lasts from September to mid-December. At that time temperatures stays between 35°C to 40°C. Towards December humidity starts increasing and the rains usually fall from mid-December to April. The total amount of rainfall is between 700 to 1500 millimeters. During the rainy season the landscape turns green because the grass and maize grow tall. The temperature gradually drops towards the end of the rainy season. The rest of the year, from May to August, is dry and rather temperate with temperatures around 20 to 25°C.

7.2 The people

People in Lungwena almost exclusively identify themselves as Yao, a distinct linguistic and ethnic group. This section describes the history of Yao and a uniting factor that produces their cultural identity: the long history with Islam.

Historical roots of the Yao⁷⁴

The Yao, who are also found in the neighboring countries, share a common geographic origin. According to oral tradition, they have dispersed from the Yao hill that is located in the Rowuma region in contemporary Northern Mozambique (Mitchell 1956, Bone 1982, Phiri 1984). In the 1830s the Yao settled into several locations around the Southern tip of Lake Nyasa, into what is now Southern Malawi. The fundamental causes of this wandering are a topic of disagreement among historians but a combination of factors have been suggested as the cause of the migrations: effects of drought and famine in Northern Mozambique, conflicts with neighboring people and even conflicts between Yao chiefdoms. As a result, the poorest of the Yao chiefdoms started invading. (Jhala 1982, Thorold 1993)

During the invasions two other peoples, Nyanja and Mang'anja, already inhabited the area but the Yao conquered them swiftly and became the dominant group in the area. This was made possible by the fact that the Yao controlled the main source of wealth: trading. They had made contacts with the Swahili and the Arabs by the beginning of the seventeenth century or even as early as in the late sixteenth century at the original Yao hill. Therefore, the Yao participated in raiding the villages of neighboring groups and sold the captures to the Arabs. They mainly traded cloth and guns for ivory and slaves. (Mitchell 1956, Bone 1982, Jhala 1982, Thorold 1993)

The earliest real challenge to Yao supremacy in the area came from British colonialists. Missionaries were the first white people to settle in the area. The first ill-starred mission was established in 1861. The encounter with the Europeans and the Yao culminated in two issues: slave trade and religion. The missionaries' and British administrations' demand that the Yao should abandon slavery led to major conflicts. In 1891, despite resistance, the colonial government forced the principal Yao chiefs to stop slave trading. (Mitchell 1956, Jhala 1982, Thorold 1993, for details of the first missions, see King and King 1992)

⁷⁴ The Yao bibliography is limited but does exist. The earliest piece of work is Y. A. Abdallah's collection of Yao traditions first published in 1919. Sociologist J.C. Mitchell published mainly in the 1950s. His major work is titled *The Yao Village* (1956). Research was not continued until the 1970s when village elders were interviewed about Yao history as part of a government program and university curricula. A major addition to historiography is a monograph by E. A. Alpers (1975) titled *Ivory and Slaves in East Central Africa*. Additionally, there is P. A. Cole-King's publication (1982) *Mangochi, mountain, the people and the fort* that includes some information about the Yao. Some scattered references about the Yao are included in the literature describing missionary work in Malawi.

Encounters with Islam

Through their trade at the coastal area the Yao were initially brought into contact with Islam. The first stage in the spread of Islam among the Yao was the conversion of some of the chiefs in the 1870s (Bone 1982). Alan Thorold (1997) remarks that the conversion is best understood as a political reaction to the British conquest. David S. Bone (1982) states that in certain Yao areas conversion became primarily a political mass movement rather than a religious phenomena.

There were more encouraging forces for the Yao to opt for Islam than for Christianity. Islam was familiar to the majority of people because of the historical contacts. Many people found conversion easy since in Islam, many elements of traditional religion could be maintained. These were, for example, ancestor veneration, tolerance towards witchcraft, and initiation and circumcision rites and polygamous marriage. Islam is also known for its flexible and accommodating stance regarding to the use of various healing beliefs and practices, and seeks to integrate them. And very importantly, Islam did not prohibit the ownership of slaves. (Jhala 1982, Pelzer 1987, Boerma and Baya 1990, for more references on conversion to Islam see Amuyunzu 1998)

Nowadays, the Yao form the majority of Malawian Muslims, about 10% of the country's population and the largest Muslim population in any country in Central East Africa. Islam has served both as a cultural marker, emphasizing Yao identity, and as a cohesive instrument amongst the Yao. (Pelzer 1983, Bone 1986, Thorold 1997⁷⁵) Islam practiced by the great majority of Malawian Muslims has been much influenced by traditional Yao religion.⁷⁶ (Bone 1982 and Sicard 1994, give detailed descriptions)

At the time of the study, the majority of the people in Lungwena were Muslims (96% in the study sample, 95% in Lungwena DHS). There were several *shehe* (sheiks, teachers) and *mwalimu* (next rank of teachers, sometimes a honorary position) in all of the villages in the area (see Bone 1982 for a detailed description of the positions). Muslim leaders in the area had both spiritual and healing functions, as will be discussed later.

⁷⁵ See also Karl Pelzer (1983): Ethnomedicine in four different villages in Malawi. University of Malawi, an unpublished report. Thorold (1997) has interestingly noticed in his analysis that voting in the first free elections, the presidential elections in 1994, also occurred along tribal lines. Major tribes had their own candidates. Thorold believes that Yao tribalism contributed to the victory of president Muluzi.

⁷⁶ So called traditional religion is deeply rooted amongst people in Malawi. Yet, it is often regarded as inferior to practice traditional ceremonies. The majority of the population do not regularly practice traditional worship but Lindskog and Lundqvist (1989) note that there are still several shrines (places of traditional worship) in Southern Malawi. I noticed that the importance of traditional religion came forth in times of crises, e.g. lack of rain, illness and death.

Christians formed a minority denomination (4% of the study sample). However, one of the villages was considered Christian because of the chief's religion. None of the people who were interviewed for the present study reported to practice traditional religion. Both Islam and Christianity appear to have been incorporated smoothly into traditional belief systems. Additionally, I could not detect confrontation of any kind between the religious groups.

Islam and education

Together with Islam, the Arabs introduced their educational system to the Yao. One of the first attractions of conversion to Islam for the Malawian chiefs was literacy in Swahili. Advancement in Islamic studies became a recognized route to status within Muslim communities. When Christian missionaries first entered Malaawi, they found that the Koran was taught in *madrassa*, or Islamic schools. Islamic education was made more popular by the fact that in the pre-independence era Western education was very strongly dominated by the Christian missions. Up to 1926 all Western education was organized by the missionaries who used it as a means for advancing Christianity. (Bone 1986, Thorold 1997) Despite the changes in the educational system after independence, Muslims of Malawi lag behind all other religious groups with regard to participation in Western education. Many Muslims, especially in the rural districts, have not lost their suspicion. (Bone 1986, Sicard 1994)

The literacy rate in Lungwena was very much lower than the national average.⁷⁷ Table 18 below shows schooling related data on the women who participated in the survey interviews. In the study sample, a rather small number of women (17%) had attended school. Additionally, only some of them (8%) had learned how to read and write.

The next section will describe how husbands and uncles, *mjomba*, were the crucial male relatives. Men fared better when it came to literacy: more than every other husband was literate and almost half of the uncles could read and write. The reason that the rate of male literacy exceeded the number of males who had attended school is that literacy classes had operated in the area. Also *madrassas*, Islamic schools, taught reading.

⁷⁷ In 1994, in Lungwena, 40% of the men and 10% of women could read and write (Lungwena Demographic and Health Survey 1994, an unpublished report). National figures for 1995 are 72% and 42%, respectively (Unicef 1997).

Table 18. Educational levels in Lungwena (survey interview material).

Educational level		n	%
Survey respondent has attended school (n = 203)	yes	35	17
	no	168	83
Survey respondent reads / writes (n = 203)	yes	17	8
	no	186	92
Respondent's husband has attended school (n = 169)	yes	14	9
	no	153	91
	respondent did not know	2	1
Respondent's husband reads / writes (n = 169)	yes	99	59
	no	70	41
Respondent's uncle has attended school (n = 149)	yes	8	5
	no	109	74
	respondent did not know	32	21
Respondent's uncle reads / writes (n = 149)	yes	72	48
	no	77	52

All in all, based on the previous literature, one is inclined to presume that in Lungwena, the low rate of formal education is also partially caused by the Yao legacy. However, more and more children attend public schools today since education was made free in 1995.

7.3 Family structure

"According to the Yao, women are quite helpless in their relationship with others, in illness or in any court cases, and must always have a man to look after them."

Mitchell (1956)

In addition to Islam, matriliney is a strong cultural code that organizes the every day lives of people in Lungwena.⁷⁸ Below, I will first draw on general sources on matriliney. After that I will discuss family structures in Lungwena, which brings also polygamy into examination.

⁷⁸ In Africa, matriliney is found in a belt stretching across Zaire, Zambia, Tanzania, and Malawi (Mair 1984).

Matriliny in literature

Matriliny, theoretically and practically, means that descent is traced through the female line. It is important to note, however, that although women are formally the owners of lineage property and sometimes have a say in the disposal of it, they do not exercise any more authority than they do in patrilineal societies. In accordance with the citation above, it is their brothers and uncles who make the lineage decisions. So, although a man's property is derived from his mother, the property itself usually comes to him from his mother's brother (Mair 1984). The fact that the male members of matrilineage exercise domestic authority, has been noticed in several studies covering the Yao in Malawi (Tew 1950, Mitchell 1956, Phiri 1983, Kishindo 1995, Brantley 1997, Peters 1997a).

According to the matrilineal norm, the core family unit is a group of sisters living together in the same village in houses very close to each other. In the local vernacular of Lungwena this was called *mbumba*. In anthropological terms it is the sorority group for a woman. One of the male relatives, usually the eldest brother, is considered to have responsibility over the group of sisters. The warden of the sorority group is called the *asyene mbumba*, or owner of the women. (Mitchell 1962)

In matrilocal rule the land belongs to the wife's family, of which the *mjomba* is in charge. The family has obtained the rights to the land from the village headman who has the power to allocate land that has not been previously distributed and also to withdraw land from people who mismanage it. When the husband moves into the wife's village at marriage, he builds a house for the wife and children. In principle a man gets access to land through marriage, as his own mother's land is supposed to be shared among his sisters. However, it is sometimes possible for a man to acquire some of his family's land if he is living in the same village, e.g. when he is divorced. (Lindskog and Lundqvist 1989, Kishindo 1995)

The key effect of matriliny on the children's position is they are considered to be part of their mother's family. The mother is the primary care taker and the head of the mother's family, usually *mjomba*, holds responsibility and authority over them. (Mitchell 1956) It has been often argued that the matrilocal system of marriage does not induce a man to invest in his wife's village. Instead, he tends to spend only some of his time and money there, since he often returns to his own village where he may be the head of his sisters' families. This is especially the case if he is the eldest brother. Thus the money, which in theory is available to a family, may not be equal to that which is actually spent on its members, including the children. (Lindskog and Lundqvist 1989)

In addition to descent, the principles and features that are attached to matriliney have evolved over decades according to the analytical lens that is applied in research. The scope of the present study allows only a very limited glimpse into the discussion of matriliney. Pauline E. Peters (1997a) has provided an excellent overview that is used as the basis for the text below.

According to Peters, the first and largest body of works on matriliney was produced during the 1940s and 1950s, when the social-structural approach to kinship reached its peak. Then, the primary concern of the British social anthropologists was in constructing typologies of social structures. Anthropologists produced a picture of matriliney as a "puzzle" which consisted of descent through women and exogamous⁷⁹ marriage. This led to men being torn between their roles as fathers and mother's brothers; their loyalties divided between their own matrilineal group and that of their wives.

The structural approach was discredited by later research for its view of social structures as determining people's organization and action. From the 1970s onwards, early research on matriliney has also been criticized for being androcentric, or male biased. The family unit was constructed from a man's point of view. The women's dilemma was not reflected upon as much as men's. The approach has also gained disapproval for its insensitivity to the detection of relevant basic social units in different settings. In the early research the implicit norm was the conjugal bond of husband, wife and their children as it is in patrilineal societies. The sister-brother bond of matrilineal societies was totally overlooked.

As a result of the critique, kinship is currently seen as more flexible, more open to multiple variants even within one society. Matriliney is referred to as a clusters of characters rather than structures for social life. Depending on the historical context and research interests, the term may include in its scope economic connections, gender relations, inheritance, decision making and living arrangements during marriage for example. Each of these terms may be described in relationship to matriliney.

In Malawi, the Northern region is considered predominantly patrilineal, while the Central and Southern regions are matrilineal (UN in Malawi and GOM 1993, Kishindo 1995). Limits are not clear-cut and both systems of marriage may be found within the same geographical area or amongst the same ethnic group (Brantley 1997).

Mary Tew (1950) laid the basis for looking at the Yao of Malawi as a distinctively matrilineal group. Mitchell (1956) gave a detailed description of the lineage. Many of the latter researchers, especially those from other fields than anthropology, have taken up the

⁷⁹ Exogamous indicates that men move to women's villages at marriage.

same approach without questioning the meaning of the term.⁸⁰ Only quite recently have researchers critically examined the implications of matriliney in Malawi. Examples are Hirschmann and Vaughan (1983) who focus on food production, Peters (1997b) who examines gender relations, and Brantley (1997) who re-interprets women's position.

Families in Lungwena

In the light of the above, how does matriliney affect family structures in Lungwena? To start with, a remark about terminology is necessary. Throughout the text I will use the word *family*. The form of a family unit varies in Lungwena as it does in every society. It is sufficient to say that in Lungwena, family does not usually refer to a so-called nuclear family consisting of a husband and wife and their children. There, a relevant unit is rather an extended family, which includes relatives from several generations. In some studies the term household has been used instead of family. However, a mere exchange of terms does not solve the problem of family. It is crucial to define family in context. (see Vaughan 1983 for more discussion)

In Lungwena, most of the women said that the head of the family was *mjomba*. This term has not been reported in studies conducted elsewhere in Yao locations. However, the Yao area is not linguistically homogenous and people in Lungwena would also understand the *asyene mbumba* expression (see also Tew 1950). The immediate translation for *mjomba* is maternal uncle. When I questioned further, Yao people who spoke their native tongue and English fluently, sometimes translated it to be the uncle of the child, sometimes uncle of the mother. This negotiability between generations has been reported before (Lindskog and Lundqvist 1989). Another feature of *mjomba* was added without prompting by three of the respondents who talked about "*newly appointed mjomba*". Thus, it appears that *mjomba* reflects not only a biological relationship but is also an honorary position or institution in the matriliney. Usually *mjomba* was one of the oldest men. However, those who were appointed as *mjomba* were relatively young.

Against the rule, quite often the head of the family was some other member of the extended family, too. Respondents made a clear distinction when the head of the family was *mjomba* or another family member. The number of different relatives that were referred to as the head of the extended family is shown in table 19 below. However, male

⁸⁰ Examples concerning Malawi include Phiri 1983, Bone 1986, Kishindo 1995, research on matriliney in other countries see Peters 1997b.

dominance in family structure was obvious as the majority of the heads were men (n = 188, 93%)⁸¹.

An important fact related to daily life in Lungwena is the fact that the Yao are not only matrilineal but also matrilocal. In the survey sample, the majority of women (n = 171, 84%) stayed in their maternal village with their extended family of grandmothers, mothers, sisters and unmarried brothers. The place of residence for husbands is shown in table 20 below. At first, the majority of the women (n = 132, 65%) said that their husbands lived with them. However, when further prompted, many of them said that the husband actually visited other wives, too. However, in a great majority of the cases the husband lived so close to the respondent that the distance did not generate any problems. The husband lived far away only in about one in ten families; most often in South Africa. Also, most heads of the families lived in Lungwena area.⁸²

Table 19. Head of the family in Lungwena (survey interview material).

Head of family (relationship to the respondent)	n=203	%
Mjomba	93	46
Brother ⁸³	69	34
Grandfather of the respondent	9	4
Father of the respondent	8	4
Mother of the respondent	6	3
Grandmother of the respondent	4	2
Husband of the respondent	4	2
Respondent herself	3	2
Children of the respondent (male)	2	1
Other (not biological relatives)	5	2

⁸¹ In this chapter the total number is 203 unless otherwise mentioned.

⁸² See Hirschman and Vaughan (1983) for similar findings in another Yao location in Malawi.

⁸³ The key informants stated that in these cases, there usually was a formally appointed *mjomba* in the family but for some reason, he was unavailable. For example, if the *mjomba* was in South Africa, the respondent's brother, often the eldest brother, acted as the head of the family.

Table 20. Place of residence of the male relatives (survey interview material).

Place of residence		n	%
Main place of residence for the husband ⁸⁴	same village as respondent	132	78
	near (walkable)	5	3
	middle distance (needs a bike)	11	7
	far (needs a motor vehicle)	21	12
Place of residence for head of the family ⁸⁵	same village as respondent	145	72
	near (walkable)	24	12
	middle distance (needs a bike)	13	7
	far (needs a motor vehicle)	19	9

Finally, basic information about marriages in the study site is collected in table 21 below. The first thing to note about family formation in Lungwena (and for that matter in Malawi as well) is that marriage is universal, at least for women. Accordingly, the majority of women in the study sample were married or had been married previously (widows and divorcees). Moreover, women especially marry very young. The mean age for women at the time of marriage in Malawi is 18 years. However, amongst a few ethnic groups including the Yao, a girl may get married soon after the onset of menstruation, at about 13 or 14 years old. (Kishindo 1995) There is no exact data available from Lungwena but my own observations support this notion.⁸⁶

⁸⁴ Data was obtained from 169 married women.

⁸⁵ Data was obtained from 201 respondents.

⁸⁶ Lindskog and Lundqvist (1989) describe the marriage contract in a Yao area in Malawi, not far away from Lungwena. The main points are: Marriage between a man and a woman is said to exist if the maternal uncle or brother, *ankhoswe*, of the man and the woman agree at a simple ceremony that the two are allowed to marry. Sometimes this ceremony takes place after a couple has stayed together for some months. The ceremony serves the purpose of validating the existing relationship. There is no religious part to this ceremony but families may want to organize a Muslim or Christian service afterwards. If one or both of the partners wish to separate, they meet together with their respective *ankhoswe* to agree that the marriage will be dissolved. If one of the partners is away (e.g. if the husband is abroad for many years), then his *ankhoswe* may act on his behalf and dissolve the marriage.

Table 21. Indicators of marriage in Lungwena (survey interview material).

Indicator		n	%
Marital status of respondent	married	169	83
	single	1	1
	separated / divorced	25	12
	widow	8	4
Number of husbands for the respondent	1	55	34
	2	65	37
	3	22	13
	4 or more	27	16
Respondent's marriage is	polygamous	139	82
	monogamous	30	18
Number of wives for the husband ⁸⁷	1	52	32
	2	49	30
	3	36	22
	4 or more	27	16
Husband has married	before respondent	112	68
	after the respondent	62	38

Another attribute that was characteristic of marriages in Lungwena is male polygamy. As a rule, men in Lungwena had several wives. Out of the 169 women who were married during the time of the survey interviews, only small minority ($n = 30/169$, 18%) said that there were no co-wives. In 52 families there was at least one wife prior to the respondent. Out of the husbands, 62 had re-married another woman after the respondent. The mean number of wives for one man was 3.0 ($n = 161$ husbands, 481 wives)⁸⁸. Quite surprisingly, male polygamy has been remarked on in the previous literature only very briefly and not as a major factor affecting family interaction. Usually it has been described as a Yao tradition before the arrival of the Arabs. As I described above, it had later been an accepted practice among Moslem men and one reason for the Yao to reject Christianity.

Women in Lungwena also quite often had several spouses, but consecutively. Women who were married during the survey reported an average of 2.2 husbands ($n = 169$, 368 husbands). All in all, it can be concluded that marriages in Lungwena are rather unstable. (for similar discussion, see Hirschman and Vaughan 1983)

⁸⁷ Data was obtained about 164 husbands.

⁸⁸ These figures do not match because five respondents said that they did not know the number of wives their husband had married before them.

Desire for children

There were plenty of children in the villages of Lungwena. Women typically carried small babies on their backs. As soon as the mother got pregnant again or the baby became too heavy he or she was left in the care of children who were a little older. There were groups of children playing together, running after a football that was made out of plastic bags or rags, rolling a worn out bicycle tire or just throwing stones at birds. Older children, maybe from the age of eight years onwards, also started helping in household chores: girls fetched water and searched for firewood, boys looked after animals. Both boys and girls worked on the fields when the land was hoed for cultivation.

While in Malawi, I talked many times with people about their ideas about children, about their reasons for wanting children and the value of children. There were also a few questions concerning these themes included in the survey questionnaire. Issues related to children evoked strong and contrasting reactions. Generally, children were very much desired. At the same time, women also considered them burden: men were often away for one reason or another and it was mothers' duty to feed the children.

Both women and men agreed that a girl becomes a woman only when she gives birth to her first child. Often when I met with women, they wanted to know if I had children; in other words, if I should be considered a grown up person. When I told them that I had one son they treated me as an equal and immediately wanted to know why I did not have more babies.⁸⁹

Survey interviews offer numeric information about these questions. Most of the respondents said that they wanted to have more children ($n = 133$, 65%). The desired number of children averaged 7.7. However, quite often the women at first responded "any number" or "according to the will of God". Some also said "children just come". I interpreted these kinds of answers as women wanting to have quite a few children but they feeling that there really was no way for them to control the number.

About one third of the women ($n = 70$, 34.5%) said that they do not desire more children. Motives for this were not further questioned but quite often they spontaneously stated their reasoning: 25 of them said that they were past their child bearing age, 10 women said that they already had enough of children and 9 women stated that they are too poor to have children. Interestingly, there were an additional 9 women who regretted that they were too old to give birth. If they were younger, they would try to have more children, they said.

⁸⁹ Jonina Einarsdottir (2000) tells about similar kind of experiences in her book.

Quite spontaneously women also mentioned several reasons for wanting many children. One day the same woman would emphasize one reason, another a different one. The most frequent reasons they gave in the survey interviews are presented in the table 22 below. From this material it appears that in most cases it is the women themselves who hope for a quite large number of children.

Boys and girls were almost equally desired: 6 women said that they would rather have boys, 12 wanted girls and to 143 women, the sex of the child did not make any difference. However, people said that it is good to have both girls and boys.

Health center statistics revealed that at the time of the survey, very few women in the area collected contraception from there. However, I could see that many of them attempted to regulate the number of children they had because they were using a string tied around their waist. The string was set by a local healer in order for the women either to become pregnant or to prevent pregnancy, according to the woman's wish. Women also drank potions made from local herbs for the same purpose.⁹⁰

Survey responses concerning contraception are collected in table 23 below. Almost one third of the women were on some kind of contraception. Quite a few of them, at least many more than had visited the health center in order to get contraception, reported using modern contraceptive measures. A good clue for understanding these kinds of answers might be that two of the women who claimed to use modern contraception explained that they were getting injections from the market. All of the users of the self-reported modern method were satisfied with their choice and did not want to change. Some of the users of an African method wanted to change over to a modern option.

Table 22. Women's reasons for wanting children (survey interview material).

Reason	n=203	%
Children help with household duties	75	37
Children will support the respondent when she is old / in the future	61	30
Children are a gift from God / Allah	37	18
So many children die anyway	8	4
Children help at fields with animals	6	3
Respondent likes children	5	3
"Children just come"	5	2
Respondent said that with many children she looks rich	2	2
Respondent's husband wants many children	2	1

⁹⁰ Cohen (2000) reports similar contraceptive measures from other parts of Malawi.

Table 23. Utilization of contraception in Lungwena (survey interview material).

	n=203	%
Responded reported that she utilizes contraception	63	31.0
contraceptive method was modern	39	
contraceptive method was African	21	
she used African method and preferred African method	15	
she used African method but preferred modern method	6	
she used modern method and preferred modern method	39	
she used modern method but preferred African method	0	
Responded reported that she did not utilize contraception	140	69.0
she would like to use a contraceptive method	72	
she would not like to use a contraceptive method	66	

Table 24. Reasons for women not to use contraception (survey interview material).

Reason for not using contraception	n=140	%
No definite reason or a very vague reasons such as laziness, I forgot etc.	37	26
Post menopause (self reported)	28	20
Respondent's child spacing is at long intervals, no need for contraception (self reported)	15	11
She wanted to have more children	13	9
Wrong information on modern contraception (judged by the researcher)	7	5
Respondent wanted to leave contraception with God / Allah	7	5
Lack of information (self reported)	6	5
Clinic too far (self reported)	5	4
Husband did not want contraception	2	1
Other reasons	20	14

Those women who were not using any contraception were further questioned about their reasons for their choice. Responses are shown in table 24 above. As I suggested a few paragraphs earlier, here too women expressed a lot of uncertainty by giving a lot of very vague answers.

In conclusion, children in Lungwena were considered to be desirable for several reasons. Respondents themselves clearly stated their wish to have a large family.

7.4 Physical setting

In a general way, the environment where people live sets the margins for their life, also for child health-seeking practices. It is probably safe to say that, by all standards, Lungwena

provided rather modest living condition. In 1992, just before the present study was conducted, the rains failed in Malawi, as they did over large parts of southern Africa. This created a situation where crops failed and many people lived on relief food. Even during normal times, there was a constant anxiety about the material matters of everyday life for most people. This was especially true for women who would have to worry about having enough to eat for the family, finding potable water, enough fuel wood and buying soap and salt. Children's illnesses on were just another additional topic to worry about.

Housing conditions

At the center of the Lungwena area there is a trading center that consists of a busy market place and a few shops selling basic food items and household articles. One of the three schools in the area is located in the proximity of the market place. The health center was the biggest and newest building there. A little further away there was a row of small brick houses for the health center staff and a modest dormitory for medical students and nursing students. The villagers' houses were located towards the lakeshore.

In the villages, houses were clustered around a central area with fields and bushy areas surrounding the compounds. Major indicators related to housing are shown in table 25 below. The majority of houses were rather small, constructed of mud bricks with a thatched roof. The floors were commonly of bare soil, neither cemented nor tiled. Very few houses had walls made of burnt bricks and corrugated iron roofing. Yao houses are rectangular, which according to Mary Tew (1950) is a visible sign of Muslim legacy.

Many families had a separate hut for bathing (data from the present study) and another hut that served as a kitchen (Kulmala et al. 2000a). The most common domestic animals were goats and chickens. Often there was a special structure for the animals, too. During the day animals were allowed to feed freely and were found in any part of the compound.

Research assistants recorded their opinion of the condition of the house where the respondent lived. The purpose of this was to get a local opinion about the housing standard. I calculated an aggregated variable based on their remarks. According to the assistant's estimation, most of the houses were either in very good shape or in very poor shape. The complaints that the assistants expressed were most often about the cleanliness of the yard.

Table 25. Housing conditions in Lungwena (survey interview material).

		n=203	%
House had	no windows	189	93
	wooden window panels	5	3
	glass windows	2	1
	no data	7	3
Walls of the house	unburned mud brick	129	64
	mud and poles	34	17
	burned brick	30	15
	plastered brick	2	1
	no information	8	3
Roof of the house	thatched	193	95
	corrugated iron	3	2
	no data	7	3

Livelihood and living

Lungwena is located in the Southern region of Malawi where the population density is very high, 125 people / km². The region covers one third of the land area of the nation and 39% of the arable land. However, 50% of the total population lives there. (UN in Malawi and GOM 1993) As a result, landholding sizes are extremely small and many families do not have a sufficient plot area to support themselves. Three out of five families had a plot that measured less than half a hectare. (Kulmala et al. 2000a)

Yet, the livelihood of the majority of the people in Lungwena depended on land. Women were usually occupied with taking care of the household chores, the family and cultivating a small plot, which was usually done together with the husband and older children. Men were either subsistence farmers or fishermen. Very few were earning their living from any other occupation.⁹¹ Contributions to the family members remaining in Lungwena from men who were living outside the area, either in Malawian towns or in South Africa appeared to be substantial. However, it was impossible to get exact data on this.

Maize was the primary crop and made up the staple food with fish, tomatoes, onions and green leafy vegetables. There was no cash-crop common to the area, although some people grow tobacco, sugar cane and rice. All cultivation was by hoe. Moreover, there was often a lack of fertilizers and hybrid seeds. Thus, it is not surprising that the food supply was insufficient. Food was especially scarce before the new harvest, i.e. in January-

⁹¹ The data comes from Lungwena Demographic and Health Survey 1994, an unpublished report.

February. Those families who had *dimba* gardens by the lake were in a much better position, as these provide the possibility of harvesting a crop all year round.

Characteristics of the respondent's amenities and property is shown in table 26 below. Information about the respondents' husbands' and uncles' living conditions as estimated by the respondent is collected in table 27. During the survey interview the ownership of these items only was inquired about as key informants and Focus Group participants had assured me that they are of importance. For example, two items that were highly valued in Lungwena were bicycles and radios. As soon as people gained some means they tried to acquire these articles. Therefore, the ownership of either a radio or a bicycle tells us about cash money in family. Women who did not own a blanket were considered to be very poor whereas those who had a mattress were rich. Similarly, it was rather common for women to own chicken but only a few rich women had cows.

In addition to those amenities and pieces of property that were included in the questionnaire, quite a few women would spontaneously report that they or their male relatives owned, for example, baskets, maize or, quite often, a suitcase full of clothes. I interpreted this to signify that it was appropriate to pose questions about economic issues, too.

Table 26. Characteristics of respondents' economic position (survey interview material).

		n	%
Amenities	pit latrine	161	79
	blanket	177	89
	dish rack	70	34
	bath house	173	85
	mattress	29	14
	rubbish pit	76	37
Domestic animals	goats	55	27
	cows	3	2
	chicken	70	34
Property	radio	51	25
	bicycle	45	22

Table 27. Characteristics of husbands' and uncles' (*mjomba*) economic position (survey interview material).

	Husbands' property ⁹²		<i>Mjomba's</i> property ⁹³	
	n	%	n	%
Bicycle	54	32	43	28
Nice house	23	14	43	28
Boat	11	6	9	6
Radio	60	35	38	19
Chicken	56	33	47	25
Cows	3	2	11	7
Goats	42	29	49	32

Additionally, I constructed aggregated variables⁹⁴ based on questions describing material living conditions in Lungwena (data not shown). The aim was not to measure the exact wealth of the people but to see if there was variation between families. Despite the obvious lack of material resources in the area, there was quite a big variance in the amount of property and amenities respondents reported. Out of the mothers, 77 (38%) rated as the poorest category, almost without any property. The rest of them reported owning some of the items that were inquired about in the survey questionnaire. Only two of the respondents possessed all of the items. There was similar variation in the economic status amongst the husbands and the *mjombas*. Variation was actually bigger than I was expecting just by observing people. It can be concluded that even though all of the families were poor, some of them were poorer than others.

7.5 Therapeutic options and medical pluralism

The section below is organized around two central concepts: sectors of health care and medical pluralism (see chapter 3.3).

⁹² Total number of women who were married during the interviews was 169.

⁹³ Total number of *mjombas* whose data was recorded was 151. There is no data on the uncles of 53 respondents. In these cases, the head of the family was another other person or data was missing.

⁹⁴ I aggregated separately variables for the respondent's property, for her husbands property and *mjomba's* property. All of the items that were listed during the survey interview scored one point.

The popular sector

In Lungwena people had access to all health care alternatives of the sector model. People exploiting the popular sector were in a position to choose between Western and local preparations and procedures. In the local parlance the word medicine, *mankhwala*, was a very broad term including modern pharmaceuticals and the local medicines in its sphere. However, people would commonly talk about *mankhwala wachikuda* and *mankhwala wachisungu*, referring to medicine of African people and white people, respectively. Thus, lay people themselves made the distinction between modern and local medications.

Modern self-medications were readily available. In Mangochi and other bigger towns there were specialized drug stores. In the villages modern medicines could be bought at local kiosks, grocery stores and at market places. All of these outlets supplied a wide variety of medicines, e.g. malaria drugs, painkillers and cough mixtures, also tetracycline, chloramphenicol and different eye ointments. If money was meager, people tried to borrow medications from neighbors.

Local home-based preparations were largely herbal in nature. Typical local medications were herbal infusions and infusions made of roots, special types of soil and bathing the child with vegetal extracts.⁹⁵ Many elderly people in Malawi could be labeled "traditional healers" since they had some knowledge of how to treat common ailments by using herbs. In the extended families there was often one member who possessed this kind of knowledge.⁹⁶ Many of the respondents themselves also knew of different ways to use herbs for treatment of ill children.

The professional sector

In Malawi, the professional sector consists of biomedical health services; there are no other organized and regulated health service providers in the country.⁹⁷ The health center that was opened in March 1993 was the only facility offering professional services in

⁹⁵ See Hunte and Sultana (1992) for similar notions in different locations.

⁹⁶ Personal communication with Dr. Fabiano, Principal of Malawi University at Zomba who has conducted research on medical use of herbs in Malawi.

⁹⁷ See chapter 2.5.3 for a description of the health services in Malawi emphasizing the important role of macroeconomy for provision of services. It is worth remembering that Western biomedical health services have a short history in Malawi. Missionaries were the first ones to practice biomedicine at the mission stations from 1860s onwards. The School of Nursing was opened in 1965 and the College of Medicine in 1991 (King and King 1992).

Lungwena. People called it *chipatala*, a term which was usually translated as hospital but refers to all kind of Western health facilities. The health center also provided preventive and curative health services according to a Malawian schedule including antenatal care, delivery care and mother-and-child clinic. The health center supplied basic medicines, such as malaria drugs, antibiotics, painkillers and iron tablets. Services and medicines were offered for free. However, every now and then the health center ran out of medication. It was very crowded and the personnel could not spend more than just a few moments with a patient. A medical officer was in charge of the health center even though the local population called him *dokotala*, doctor. Moreover, only a couple of members of the staff spoke the local language. Thus, the practice of biomedicine in Lungwena was somewhat problematic.

Additionally, there were two pay-clinics just outside the Lungwena area, one at Malindi and the other one in Namalaka, both about 15 kilometers away. The distance to the District Hospital in Mangochi was about 30 kilometers, or an hour ride away.

Out of the 203 women who participated the survey, a great majority 140 (70%) said that if they went to *chipatala*, they would primarily use the local health center. However, there was also a considerable number ($n = 63$, 30%) of those who preferred the other modern facilities despite the fact that they charged for services.

In Lungwena, modern health care was physically distant because traveling to a *chipatala* was always a problem. Distances from the villages where survey interviews were conducted to the health center are shown in table 28 below. Most of the women who answered the survey questions said that they would have to walk to the health center if a small child fell ill ($n = 188$, 93%). Many mothers would also walk and carry a bigger child ($n = 85$, 42%). Typically mothers would, however, transfer bigger children on a bike ($n = 94$, 46%). Some additional respondents stated that the only possibility of getting a bigger child to a *chipatala* was to rent a car ($n = 19$, 9%) which of course, was very difficult under the circumstances. A few women said that they would try to find a stretcher and men to carry the child to the health center ($n = 5$, 2%). Thus, a visit to the health center involved considerable hardship for guardians, both in terms of travel time and financial cost.

Table 28. Distance to the health center (from central village area).⁹⁸

Name of the village	kilometers
Fowo	6
Kapinjiri	1
Kwilasya	5
Mwanjati	10
Ntumbula	8
Talia	5

The folk sector

In contrast to the stark shortage of doctors, nurses, and trained paramedical officers, there were plenty of local healers in Malawi⁹⁹. In Lungwena, healers who would belong to the folk sector according to Kleinman's sectoral mode (see chapter 3.3) were found in every village. I interviewed both Muslim healers and healers using non-religious, local methods. They operated actively and treated all ailments in adults and in children.

As I mentioned earlier, Muslim healers were called *shehe* or *mwalimu*. They used the Koran for diagnostic purposes and for therapy (see also Pelzer 1987). The informants revealed that one of the *shehe* was especially popular amongst villagers. Therefore I decided to visit him. He was an elderly man, maybe in his 70s. He showed me how he immersed texts that he had written in Arabic in a small amount of water. The patients would drink the water as medicine. He also did tattoos and prepared herbal medicines. He explained that he treated many people every day and several of his patients were children. He was obviously proud of his skills and his reputation. However, he emphasized that he could not help all his patients. Those he could not help, he would refer to the health center.

Non-religious healers were called *sing'anga*. They typically did not practice divination but treated people with self-made medicines.¹⁰⁰ An example of a *sing'anga* who I visited was a healer who was said to be especially effective in her treatment procedures. She was a woman in her 50s and by local standards, had a quite big house. She had her office at home but she also covered a wide area by traveling to customers. She showed me

⁹⁸ Distances are reported in Kulmala et al. (2000a).

⁹⁹ Paul Courtright surveyed 71 villages in Malawi and identified 117 traditional healers. He excluded market healers from the study because, in his opinion, they tend to be trades people rather than traditional healers. There was, on average, one traditional healer per 334 people. (Courtright 1995) Brian Morris estimated that there was a traditional healer per 275 persons in Domasi, in South Malawi (Morris 1986).

¹⁰⁰ Brian Morris (1986 and 1998) reports similar findings from other locations of Malawi.

letters she had received from patients as far as from South Africa. She used a gourd as a diagnostic device. Her medicines were mostly prepared out of herbs. Additionally, she knew how to charm a string for different purposes, for prevention of unwanted pregnancies or for childhood illnesses. She also sewed small pouches that were worn around the neck, tied in a string. The pouch protected the owner against different kinds of misfortunes including illnesses. (see King and King 1992 for similar description)

Healers charged from 1 Kwacha (then 0.5 €) upwards. However, if it was necessary for the healer to go to the bush to look for medication, *chiponda m'tengo*, then the charge could be as high as 20 Kwacha. Thus, if transportation fees are not considered, local healers could be the most financially costly options. Time wise they were the most convenient even though sometimes people traveled to well-known traditional healers over quite long distances, as the description about *sing'anga* above reveals.

Medical pluralism

In the light of the above, Lungwena was undeniably a highly pluralistic health-seeking environment. Health-seekers were able to utilize the treatment options that I described above exclusively, successively, or simultaneously (Stoner 1986) or critically and situationally (Worsley 1982). Medical pluralism actually already existed before the modern health center was opened: there were healers exploiting religious medical knowledge and as well as secular healers operating in the area. There were also modern and local medications available.

Once considered as medical systems, different health care options in Lungwena co-existed but usually did not co-operate. A major exception to this rule was offered by the case of traditional birth attendants (TBAs). During the time of the field study, there was a TBA in every village of the area. Training of the TBAs was arranged by the health center. From the point of view of lay people, different treatment options were not sectors in isolation from each other. Rather, they turn to resources. It was obvious that in Lungwena people routinely combined elements of different health services. Organizationally, however, treatment had to be sought from different places. In practice, despite medical pluralism in the area, the margin of choice was quite narrow because of limited means of transportation. I will come back to this issue while describing child health-seeking practices.

8 CONCEPTS OF CHILDHOOD HEALTH PROBLEMS

During my stay in Malawi, I learned the names of many childhood health problems but did not know what the words meant. While visiting the villages in the Lungwena area I could easily detect according to my judgment that, some of the children were not well. Quite a few of them had distended stomachs. Every now and then there was a child whose hair had turned red, which is a typical sign of severe malnutrition. Many children had a runny nose, they were coughing or had irritated eyes. Children also tended to have skin rash. But generally, children were cleaner and better clothed than one would expect in a village environment where there was a constant lack of water and soap.

The above description is based on my evaluation of childhood health problems and the perspective is intentionally biomedical. The rest of the chapter, however, operates with two viewpoints: data is examined with a biomedical lens but the material is also examined for the diversity of lay perspectives. I will first look at the question of children's health status by listing the childhood illnesses mothers in Lungwena felt were problematic. After that, the text goes on to describe how the respondents defined the symptoms, prevention and causation of these illnesses. (Next chapter is about treatment of childhood illnesses.)

Before proceeding to concepts of childhood illnesses in Lungwena, a note about structure of the text is necessary. It has been my decision to construct the study object by giving an illness a name and attaching symptoms, prevention, causation and treatment to it. Medical anthropologists, however, have questioned the value of dividing illness perceptions into categories like this. The criticism has concentrated on two interrelated points: Firstly, these categories are based on conventional biomedical conceptions of diseases that are encoded in clinical medical practice and a Western cultural code of diseases. They do not necessarily reflect cultural definitions of health problems. Secondly, it has been argued that all of these categories are an essential part of an illness entity; symptoms, prevention and causation do not exist separately. Therefore, for example, naming a health problem cannot be separated from the other aspects of it. In other words, giving a health problem a name already implies appropriate treatment options for example. (Csordas and Kleinman 1996) It has also been suggested that lay people do not necessarily work with a framework of symptom, diagnosis, and treatment, and are not always concerned with underlying illness. For example, mothers may only aim at the management of a child whose day-to-day behavior is giving trouble. (Cunningham-Burley 1990)

On the other hand, the majority of the studies in medical anthropology presuppose that health problems are somehow diagnosed and reacted upon. Concepts concerning the etiology of illnesses are important not only in guiding the treatment course that is chosen for an ailing child, but also in what effect various methods of treatment are expected to have.

8.1 Variety of illnesses

It became obvious from the very beginning of the key informant interviews and the Focus Group discussions that there was an abundance of child health problems that troubled the mothers. It was also clear that women were very eager to participate in the interviews and to discuss the theme. In the meetings, there was an intense atmosphere because all of the participants wanted to say something about child health.

The impression that child health problems greatly bother mothers was reinforced by the findings of the survey. During the first 50 survey interviews, mothers were asked whether they thought that their children were sick very often. Only one of them gave a negative statement saying that childhood illnesses do not pose a problem. The rest of them, (49 mothers) said that children fall ill frequently. After those 50 interviews, I chose not to repeat the question but research assistants continued to ask specifically about the illnesses of children.

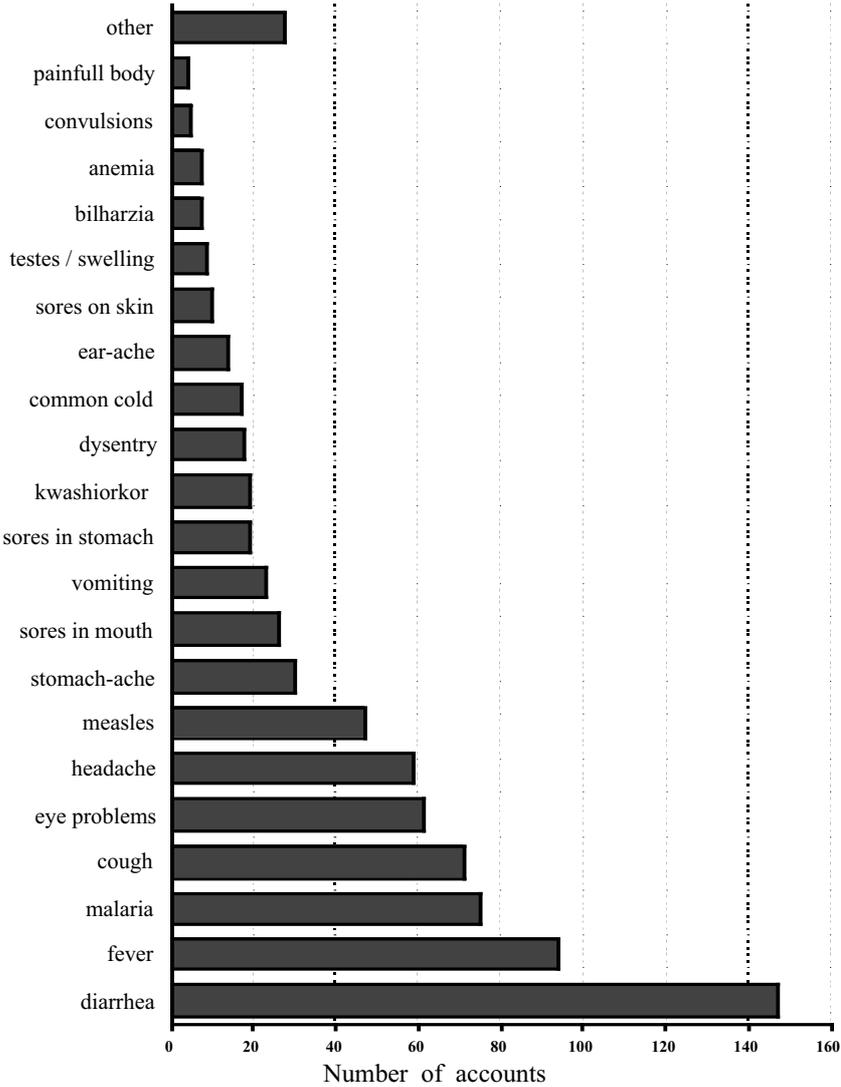
There was a great variety of child health problems that the mothers were concerned about. The number of different illnesses that were mentioned during the four Focus Group meetings varied from 15 to 17 per gathering. There was no difference between the older and younger mothers regarding the ailments mentioned or the number of illnesses that were named.

In the survey interviews the issue of childhood health problems was introduced by asking about the illnesses children commonly suffer in a very informal way. 891 remarks about 50 different illnesses were collected altogether. At this point the mothers usually only mentioned the illnesses by name, and did not explain anything more.

Next, the interviewers required that the respondent name the five most common ailments out of the list they had given. These illnesses were then discussed in more detail. This question provided 790 entries of 47 different illnesses. All mothers mentioned at least two different health problems that they specifically wanted to talk about with the interviewer. Five different illnesses (the maximum that the questionnaire allowed)

were named by 73 respondents. The illnesses that were mentioned most often are shown in graph 4 below.¹⁰¹

A key issue in a study of this sort concerns the translation between the terms that are used locally and those in English that are based on biomedical code. The terms for illnesses in the graph above are translations from Yao, the vernacular of the area. I went through the



Graph 4. Child health problems reported to be the commonest in Lungwena (790 survey accounts).

¹⁰¹ In addition to these 21 illnesses shown in the graph there were 28 remarks on 22 distinct health problems, depicted by the "other" column.

terms with several native speakers who were fluent in English and in Yao. Two things became obvious during these translation sessions. Firstly, these terms were widely used and understood by Yao speakers and secondly, people agreed upon the appropriate way to translate the names of the illnesses.

There were only a few remarks that proved to be problematic for translation. There was one notion of *kabudula*¹⁰², an illness that interpreters had not heard of before and were not able to translate or explain. Additionally, there were a few accounts of *ngasi*, *nsipa* and *liwandama* that were translated in various ways. However, the translators assured me that all of them referred to the same condition that could be manifested either as problems of spleen, swelling below the ribs or bulging of testes.¹⁰³

The nature of the most common childhood health problems listed above will become cleared towards the end of next chapter in the discussion of criteria for diagnosing the illnesses.

8.2 Criteria for identifying illnesses

In the focus group meetings, illnesses that the participants identified as problematic for their children's well being were discussed one by one. When it came to the diagnostic criteria of the illnesses, the facilitator asked the participants "how can you tell that a child has got this illness?". Usually one of the discussants mentioned one symptom, another added to it and maybe a third one made the list more complete. On a few occasions, participants decided that one of the symptoms initially associated with the illness, did not in fact refer to it. In this way, discussants sought a combination of symptoms that would gain common acceptance. As a result, the diagnostic criteria for any childhood illness consisted of several symptoms.

Furthermore, respondents pointed out on several occasions that it is often difficult to tell whether a child is really ill and what the nature of the illness is. During one focus group gathering, participants even turned to the facilitator whom they knew to be a registered nurse and asked her for help in discussing the symptoms of illnesses. On another occasion discussants also said that they believed that white people know about different illnesses and have no need to ask for their knowledge. In the villages, there is too little knowledge and

¹⁰² Interestingly, a health problem called *kabudula* was reported by a 25 to 30 year old mother who had attended school for three years. She explained that when a child has *kabudula* her / his arms and legs become painful and the child walks unevenly.

¹⁰³ In the graph above all of these cases are under the testes / swelling category.

they are not sure about different health problems, the discussants continued. Should I not be teaching them? ¹⁰⁴ From the Focus Group accounts I concluded that health and illness constitute a continuum, and the point at which one becomes the other is often vague.

During the survey interviews 1180 remarks on different symptoms were recorded. The responses reveal a similar ambiguity related to diagnosing various childhood illnesses as mothers expressed in the Focus Groups. There is considerable variation in the symptoms that different respondents connected to the very same illness. Therefore, it is not sensible to draft detailed rules about how mothers diagnose an illness. Seen as a whole, the diagnostic criteria was typically based on obvious and concrete physical manifestations of illnesses. Table 29 below shows the diversity of symptoms that mothers attached to childhood illnesses and reveals that most often mothers mentioned fever, diarrhea, cough and discharge from the eyes.

Table 29. Symptoms connected to childhood illnesses (1180 remarks during survey interviews).

symptoms that were mentioned over 50 times	n	symptoms that were mentioned 10–50 times	n	symptoms that were mentioned less than 10 times	n
fever	217	red eyes	48	distended stomach	8
diarrhea	152	respiratory changes	42	discharge form ears	8
cough	83	shivering	41	child rubs ears	7
discharge from eyes	58	skin rash	38	blood in urine	7
crying	53	mouth / tongue sores	32	child is unable to walk	7
		vomiting	30	looses sight	7
		swelling of child's body	27	child keeps eyes closed	7
		sunken / swollen eyes	26	headache	6
		blood in stools	19	other	113
		no appetite, does not suck	17		
		child becomes weak	17		
		skin color changes	16		
		nerves / veins show	14		
		sneezing / runny nose	14		
		hot head	12		
		child twists	11		

¹⁰⁴ Anthropologist Robert Pool (1994) reports a similar kind of occasion from Cameroon: "I asked people which illnesses were common, what the symptoms were and what they thought the causes were. When I asked about causes people were often bewildered. Were they doctors? How were they to know what caused illnesses? Was that not what I should be telling them?"

Prevention of illnesses

A major visible sign of attempts to prevent childhood health problems in Lungwena was the pierced ears of many boys. This aimed at averting *nsipa* and *ngasi*, illnesses discussed above. Yards as well as the houses were extremely neatly swept. During the discussions I realized that this also aimed at maintaining good health.

In the Yao language there is no specific term for the prevention of illnesses. Therefore, in the course of the interviews, questions about prevention were formulated as "what can you do so that your child will not get this illness". While mothers talked about illness prevention their speech contained even more hesitation than earlier discussions of symptoms.

During the surveys, 817 different accounts of childhood illnesses prevention were collected. As table 30 below shows, almost half of the survey answers suggested that, according to the interviewee, there was no prevention for the illness that was under discussion.

The main preventive actions that mothers mentioned were related to cleanliness. A remark on the local terms is needed here: Two expressions that mothers frequently used in relation to prevention were *usakwa* and *ngasamalira*. In this context, the informants translated the words to mean cleaning and caring, respectively. The former literally means dirt, dirty or unclean. The latter has a double meaning. Firstly, it translates as to take care of something such as the house, children or food. Secondly, it also means cleaning. Both of the words may be used as a noun and as a verb. They describe different aspects of the same idea of prevention and more generally, actions aimed at good health. Cleaning was considered to be good for the health in general. Additionally, respondents said that it was the duty of women to see that the household and family members were well cleaned. In practice this meant sweeping the house, especially the yard, and washing the clothes of family members. Inversely, if someone in the family fell ill, women were easily blamed.

Respondents said that it was possible to avert at least some children's illnesses if the mother cleaned the house and the environment, washed the children and their clothes and looked after the children properly. Women also emphasized that they had to be very careful with cooking. According to the respondents, it was especially important to store drinking water in a container with a cover. Finally, hospital related prevention typically meant the collection of vaccinations, even if the practice of vaccinating against diseases was not always clear.

Table 30. Prevention of children's illnesses (824 remarks during survey interviews).

Prevention	n=817	%
No prevention	390	47
Cleaning and caring	235	27
Food and drink related	51	6
Collect prevention from hospital	41	5
Respondent said she does not know	30	4
Use of latrine and rubbish pit	31	4
Proper behavior	15	2
Only God can prevent	4	1
Local healer	2	1
Other kind of prevention	25	3

Thus, respondents often failed to name any preventive measures for individual health problems. However, there was a generally held concept of preventive behavior. Besides cleaning and caring, participants in Focus Group discussions and survey respondents often mentioned poverty as a general background factor for illnesses. In their opinion, with more material resources there would not be so many health problems even though they were unable to identify the exact pathways.

Causation of illnesses

In line with the answers about the difficulty of reaching the right diagnosis, women often expressed their unawareness about the causes of illnesses. Table 31 below is based on 797 accounts on causation that were collected during the survey interviews. Almost half of the

Table 31. Causation of children's illnesses (798 remarks during survey interviews).

Causation	n=798	%
The respondent says that she does not know	379	48
Mother is careless and unhygienic	194	24
God	62	8
Dust, sun, wind	43	5
Food or drink related	43	5
Flies / mosquitoes	17	2
Illness is a normal part of childhood	9	2
Reference to mother's / father's sexual misbehavior	8	1
Other	41	5

survey answers indicated that mothers did not know the causes for childhood illnesses they reported to be common. Here again, women often firstly referred to meager material conditions as the cause of all health troubles: "we are so poor" they would say. In informal discussions and in Focus Group discussions women also often referred to the general poverty in the area as a possible cause for the poor child health situation. Only when they were asked about specific mechanisms of causation, respondents said that they do not know.

A quarter of respondents' remarks on causation emphasized that if the mother is careless and unhygienic, children will get ill. An important cause of illnesses was *Mlungu*, God (62 illness accounts, 8%). I would estimate, however, that the position of God in lay accounts on disease causation was much stronger than the numbers indicate. In addition to explicitly mentioning God, women would often say, "illnesses just come". After that they added a specified cause such as dust for malaria. Mary Amuyunzu (1998) has interpreted "illnesses just come" type answers as indicating that people blame them on God and that there is nothing that people can do to prevent them.

There is still one remark remaining. The survey technique covers the fact that according to the mothers, there were many potential causes of health problems. This became especially obvious during the Focus Group discussions. Therefore, the replies that mothers gave during the survey interviews reveal only the immediate causes of the illnesses. If the treatment of a child's illness failed and health problems were prolonged mothers would start looking for additional causes which then, included distorted social relationships, for example.¹⁰⁵

8.3 Conclusions: uncertain identification of illnesses

A basic thematic aspect related to child health-seeking concerns the way lay people identify certain conditions as health problems. Above, I first listed the childhood health problems mothers reported to be the most common. Additionally, I translated the meaning of the illnesses. The task consisted of an examination of diagnostic criteria, the ways in which guardians prevented the illnesses, and knowledge on causation.¹⁰⁶ It should be obvious

¹⁰⁵ Susan Reynolds-Whyte (1997) has noted a similar process in Uganda.

¹⁰⁶ Stephen Frankel (1986) and Robert Pool (1994) describe a similar translation process as a part of their fieldwork.

from the examination that even if the interpreters were able to translate the names of the health problems, the meaning of the illnesses in Yao and in English did not correspond.

Most of all, the above examination conveys the uncertainty that mothers felt about the nature of children's health problems. This was revealed from all the themes that were dealt with while concepts of child health problems were clarified. Firstly, it was difficult for the mothers to diagnose illnesses. Secondly, the mothers typically said that they did not know either means of prevention nor causative agents for the illnesses. A considerably smaller number of survey interviewees counted on cleaning and good care of children even if they were not sure about the etiology of the illnesses.

These findings correspond with findings in previous studies in Africa and also elsewhere. Lay explanations of illnesses are typically not coherent (Cunningham-Burley 1990, Adetunji 1991). Susan Reynolds-Whyte (1997) writes that people are usually uncertain about the causation and prevention of illnesses. She explains, referring to John Dewey, that uncertainty is "an aspect of specific experience and practice". She noticed in Uganda, where she has worked and lived for a long time, that people negotiate answers that form the basis for treatment, which may be followed by further uncertainty both about how to deal with the affliction and about the agents and the social world they represent. Indeed, people know that they may at times spend large sums of money, sacrifice animals, and inconvenience themselves in vain.

Murray Last (1981) has suggested that not knowing about medical culture indicates the breakdown of traditional medicine *as a system*. Modern medicine has arrived in the area only in the form of medications, not as an intellectual system. This, of course, leads to uncertainty about appropriate therapy and therapeutic trials as will be seen in the next chapter.

The great proportion of illnesses that women considered to be unpreventable indicates two different aspects of their health perceptions. On the one hand, it can be seen as fatalism. On the other hand, this attitude may reflect their past experiences and thus be a rational appreciation of the situation. Respondents acknowledged the insufficient resources women in Lungwena had. Even if respondents had been aware of the preventive measures biomedicine offers, in reality they might not have had the resources to apply them. Julia Segar (1997) has shown that in a materially poor environment women readily recognize the role of poverty in the background of illnesses. With the interview answers respondents draw a picture of themselves as women who, despite lacking resources, work hard for their children's health. According to them a good mother cares for the children, cleans and washes. Still, there is no guarantee of the result: children might still catch an illness.

Finally, contrary to much anthropological research emphasizing the central role of supernatural elements and witchcraft in lay explanations of childhood illnesses, the materials from Lungwena reveal the dominance of practical explanations. Aetiological accounts were dominated by a self-reported lack of knowledge or natural domain. Notions of illness causation are an important issue in studies that examine an approach to health care from the viewpoint of medical systems. In this case, biomedicine and local healing practices are considered as separate systems with separate functions. Ndolamb Ngokwey (1988) characterized earlier anthropological literature, noting "the pervasiveness of a few ideas, notably the assumption that etiological knowledge in *non-Western* cultures is primarily dominated by religious or supernatural beliefs, in contrast to supposedly more scientific and rational *Western* etiological system. Thus, anthropologists in their enthusiasm for more exotic treatment options often neglected natural ways to treat illnesses; natural response to illnesses has been noted only recently". Between the mid-1970s and mid 1980s a number of publications appeared in which earlier anthropological work on illnesses was criticized for placing too much emphasis on supernatural causation and neglecting natural causation and practical medical behaviors (Pool 1994). For example, Stephen Frankel observed the willingness of the Huli in Papua New Guinea to be satisfied with naturalistic explanations. Similarly, Ndolamb Ngokwey (1988) has shown that environmental elements play an important role in illness identification in Brazil. Susan Reynolds-Whyte (1997) talks about symptomatic treatment in Uganda. She notes that it is cheaper to deal with symptoms than with causes, and it is usually the first resort. When the illness becomes worse or spreads to others in the family it is taken as an indication that dealing with symptoms is not enough and people begin to look at other aspects of the problem.

9 CARE CONVENTIONS

This section deals with lay concepts of appropriate illness treatment. Therapeutic options in Lungwena that set the frame for child health-seeking were discussed in chapter 7.5 above.

9.1 Attitudes and preferred action

From informant interviews and Focus Group interviews I obtained the impression that people in Lungwena had a positive attitude towards modern medicine. Modern medications appeared to be especially highly valued. People also expressed their appreciation of the treatment offered at the health center. Survey interviews confirmed this to be the case.

According to Julia Segar's (1997) fieldwork experiences, interviewees tend to see very generally formulated questions as offering an opportunity to voice their attitudes and feelings. Information in table 32 below is elicited from such questions about care conventions included in survey interviews. I could hear from the tapes that respondents stated their selection without any hesitation or uncertainty. This further confirmed that answers to general questions express attitudes, not knowledge, amongst the mothers. While the questions inquired about the course of treatment in most general manner, the majority of the survey respondents stated that once a child fell ill, they wanted him / her to be given modern medicines. For that purpose, mothers would either take the child to the health center or treat her / him with *mapilisi*, pills. Considerably fewer mothers said that they would administer locally prepared medications or visit a local healer.

Table 32. Mother's first reaction when she notices that her child is sick (203 survey interview accounts).

Mother's first reaction	n=203	%
Go to the health center	102	50
Administer pills	60	30
Administer traditional medicine	17	8
Go to a local healer	12	6
Administer both traditional and modern medicine	8	4
Other	4	2

Answers to survey questions concerning specified illnesses were formed after some consideration and thinking. Appropriate care was more difficult for the respondents to choose. Typically they considered the matter from several angles. According to the study design I interpret these answer as describing preferred action rather than actual behavior. These answers picture the mother's responses to childhood illnesses slightly differently. Table 33 below summarizes answers to two questions: The first one simply inquired "how do you treat this illness". The second question was formulated as, "if the treatment that you first tried out did not help, what do you do next?". Here, local medications and *mapilisi* appear almost equally popular. Only in a situation when the first treatment was not successful and a second course of treatment was needed, did the role of the health center grow more important. Under these circumstances some of the respondents specified that they would use one of the pay facilities if possible. Interestingly, without prompting, many respondents specified the type of treatment they wanted to be given at the health center. Injections were very popular.

A few responses indicated that mothers would not try to treat some childhood illness cases. When inquiring about prolonged illness, this group grew highly important. Informal discussions indicated, that this passivity was mainly caused by the mothers' perception of an incurable disease attack. Such surrender was most commonly expressed in the context of tricks, diarrhea or kwashiorkor. I will describe this phenomenon here as "fatalism" and come back to it in the concluding chapter.

Treatment as a process was further surveyed with another question. Responses are reported in table 34. Respondents were asked about their actions in cases where they had exhausted home medications and the child had not recovered. In such cases, a great majority of the mothers would prefer a visit to a health center. Interestingly, here again the theme of fatalism comes forth: four mothers (2%) said that they would totally give up treatment if the children were not cured with the resources that were available at home.

Table 33. Variety of treatment for childhood illnesses (203 survey interviews about specified illnesses).

Treatment	First treatment (n=793)		Second treatment (n=790)	
	n	%	n	%
Specified modern medicine	287	35	29	4
Local medications	258	32	155	19
She collects medicine from the health center	133	16	384	48
Non-specified modern medicine	84	11	24	3
Nothing	18	2	183	22
A vague answer	3	1	5	1
Combination of local and modern medicine	6	1	5	1
She says that she does not know	3	1	3	1
Other	1	1	2	1

Table 34. Preferred type of medication if home treatment failed (203 survey interviews).

Preferred type of medication	n=203	%
Medicines from the health center	159	78
Medicines from a local healer	25	12
Look for more traditional medicine	6	3
Combination of modern and traditional medicines	5	3
Nothing	4	2
More modern self medication	2	1
Other	2	1

All in all, when describing the treatment of the most common illnesses, a great majority of the respondents (n = 192, 95%) reported the utilization of both local and modern treatment options at one stage of the treatment process. The remaining eleven mothers mentioned treatment options that belonged only to the modern sector. None of the respondents stuck exclusively with the local options. Once the individual illness episodes that the respondents talked about are analyzed, a combination of local and modern medications in the course of one illness episode was the most typical care convention: in about half of the illness cases (n = 317 / 790, 40%) mothers experimented with both a local and a modern treatment option.

9.2 Perceptions about efficacy

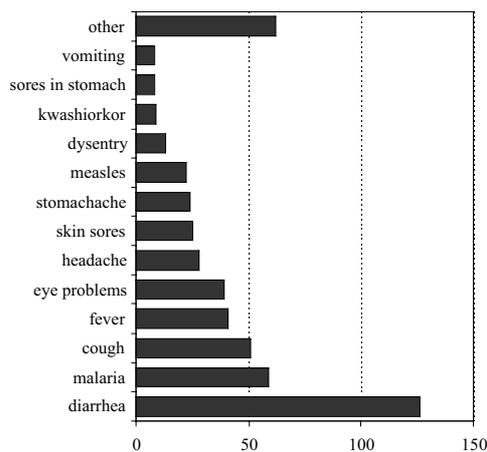
An important aspect contributing to knowledge of the utilization of therapy options may be drawn from the role that lay people grant different therapy options. I was rather surprised that in discussions with various lay people I could not detect any confrontation between the local healer–health center poles. Survey interviews included questions that aimed at further clarifying this theme.

To start with, all women reported that they had used both locally prepared medications and modern manufactured medications for the treatment of child health problems. 120 (59%) respondents said that they had also used the services of local healers. Only 2 mothers said that they had never taken their children to a health center.

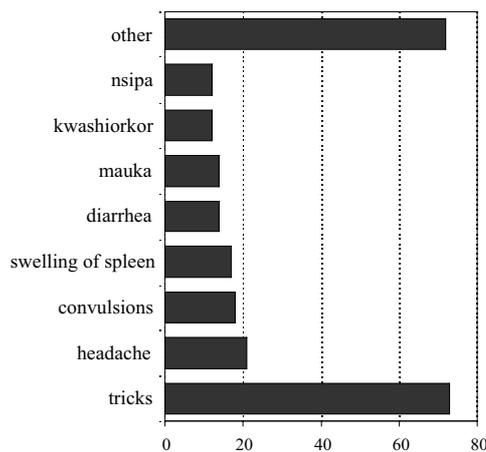
In accordance with other answers, a great majority of the respondents stated that treatment at the health centre is the most efficient option for childhood illnesses (n = 175, 86%). Additionally, a great majority of respondents reported to be satisfied with the services at the health centre. Only one of the mothers said that the child's condition had not improved; the rest said that the *dokotala* had helped. A few respondents (n = 14, 7%) considered traditional healers to be the most efficient source of treatment. The majority of those who had used the healers were satisfied with the services (n = 115/120, 96%). Only five mothers complained that the ailing child had not recovered when treated by a healer. Some of respondents explicitly said that there was no difference in efficiency between local healers and the health centre.¹⁰⁷

Even if there was no open juxtaposition between sectors of care, women clearly differentiated between the core competence area of the local healers and of the health centre. Women strongly emphasised that the health center and the local healers were good at curing different kinds of health problems. Only 3 of the respondents said that health center and healers treat all childhood health problems equally well. According to the respondents, however, it was tricky to choose the right option. The majority of the respondents, however, specified health problems that were treated either better by a healer or at the health center. Results are shown in the graphs 5 and 6 below.

¹⁰⁷ Unfortunately I was unable to dig deeper into the issues of patient satisfaction. This is largely due to the custom that in Lungwena straight answers were considered impolite or rude. Therefore, questions about satisfaction typically evoked “yes, if” answers. Examples are answers such as “Yes, I am happy with the treatment at the health centre if they give an injection to the child”, “I am satisfied with the treatment if the child is not given half pills”, or “I am happy with the *sing'anga* if (s)he prepares the bitter medicine for my child”. Thus, it appears that women knew very definitely what they wanted from various health care providers.



Graph 5. Illnesses that require treatment at the health center (n=515 survey accounts)



Graph 6. Illnesses that require treatment at a traditional healer (n=287 survey accounts)

Some of the illnesses that are preferably treated by a healer may need clarification. *Tricks* are caused by other people and they can have any symptoms. Either the relatives of the patient or a traditional healer can make a diagnosis for tricks. According to the respondents, swelling of spleen was rather common on children. They said that they could feel it by pressing the child's abdomen. *Nsipa* means the bulging of the testes. *Mauka* is a procedure where female external genitalia are incised as a therapy for high fever in children and sometimes also for other health problems. It is rather obvious that the health center is unable to treat the above problems. It is worth emphasizing that the health problems the respondents reported to be the most common belonged to the category of illnesses treatable at the health center.

An additional viewpoint about treatment practices was obtained with a question about illness cases that required urgent help. Table 35 below shows the findings. Here too, the health center was the preferred option. However, the most interesting finding was that some mothers (n = 13, 6%) explained that the first thing they would have to do is to get some money for treatment. Only then were they able to decide about the nature of treatment.

Perceptions about medicines were also assessed during the survey interviews. In a situation that mothers decided to acquire medicine for an ill child, pills were the preferred option. Many respondents named certain kind of pills that they would use (65/183= 35%¹⁰⁸). Pills that were named were usually Aspirin®, Panadol® or Penicillin.

¹⁰⁸ This question was not included in the first 20 questionnaires, thus n = 183.

Typical answers were "I go and get Panadol from the shop" or "I will get Penicillin from the market place". Many mothers, however, generally stated that they preferred to use *mapilisi* pills (50/183 = 27%). A typical answer was "I buy pills from the shop". About every fifth mother (41/183 = 22%) preferred locally made medicines. Those who specified more said, for example, "I boil roots" or "I bathe the child with leaves".

Table 36 below indicates that, in most childhood illness cases, mothers reported that they react rapidly after the onset of symptoms. However, in a few of the illness cases (14/786, 2%) respondents said that no treatment was administered at all. Also, quite a few respondents were rather vague in their wording.

After administering the first medication, children were generally expected to be better very quickly as table 37 below shows. However, there were some illness episodes that the mothers expected to last up to one month. Out of the illnesses that take a long time to get cured, measles (n = 8), diarrhea (n = 5) and fever (n = 4) were mentioned most often. In nine of the illness accounts that were collected during the survey, mothers expressed their doubt that the child would not get cured at all. These cases included diarrhea or bloody diarrhea (n = 5), bilharzia (n = 2), kwashiorkor (n = 1) and testes problems (n = 1).

Table 35. Mothers' reaction if child is in need of urgent help (n = 203 survey accounts).

Type of treatment in urgent situations	n	%
Go to hospital	133	65
Go to a local healer	25	12
Buy modern medicine	15	7
Treat with traditional medicine	10	5
Try to get money for modern medications	9	4
Try to get money for traditional medicine	3	2
Combination of modern and local medicines	3	2
Money for any kind of medicine	1	1
Someone else takes action	4	2

Table 36. Pace of treatment of childhood illnesses (n = 786 survey accounts).

Answers to the question: how soon do you start treatment?	n	%
Same day	299	38
Next day	274	35
Same week	119	15
Same month	6	1
Vague answer	70	9
She does not know	4	1
Child is not treated	14	2

Table 37. Expected pace for children to get better (n = 777 survey accounts).

Expected pace of healing	n	%
Same day	108	14
2-3 days	357	46
Same week	221	28
Same month	48	6
She says she doesn't know	5	1
The child doesn't get cured	9	1
A vague answer	29	4

In the survey there was an additional question assessing respondents' perceptions about the curability of childhood illnesses. Here, almost one third of the mothers (n = 63, 30%) said that there are illnesses that cannot be cured. The list of incurable illnesses included common childhood health problems such as diarrhea and fever but also locally defined illnesses such as tricks and sores. However, this did not mean that in the cases of childhood illnesses where treatment was considered hopeless, there would not be a reaction at all. Rather, in the line with the uncertainty of identification of these illnesses, there was considerable uncertainty about the success of treatment attempts as well.

9.3 Conclusions: "you take the child to the hospital and hope for the best"

Lay explanations of childhood illness are important because they provide an insight into local comprehension of health problems. The section above described how guardians acted (or chose not to act) upon common childhood illnesses. My initial impression was that people in Lungwena put a lot of time and effort into the treatment of health problems. In the light of the above, this appears to be also true for childhood illnesses.

I used the local-modern axis as a tool for analyzing answers on care conventions. It appears justified, because the respondents themselves used this wording. Additionally, it is a commonly used mode of expression in other African languages too (see Mogensen 1998 and Einarsdottir 2000 for examples). Once estimated from this perspective, people valued modern medications and the health center to such an extent that in questions about attitudes they appeared more popular than the local options. Because all the interviewers were local women, this may not be explained by the fact that in interviews people tend to choose socially preferred responses. In illness-specific accounts that aimed at examining preferred action, local therapy options had a more prominent role than biomedical options.

The local-modern division as such, however, does not describe child health-seeking behavior as it appears from the survey interviews especially well. Rather than picturing two opposing options, mothers typically reported that they combined elements from several sources. Additionally, respondents did not look upon the different treatment options as "superior" or "inferior" but rather as resources. Even though the distinction between *mankhwala wachikuda* and *mankhwala wachisungu* is pronounced, it appears that the synchronization of different sectors has taken place. The materials show the treatment practices of childhood illnesses as a continuous trial.¹⁰⁹ As one of the respondents put it: you take the child to the health center and hope for the best. Yet, to some degree, there was obvious discrimination between local and biomedical care options. With some illness cases respondents reported that they would rather utilize the health center, while for other cases healers were preferred.

As I showed in section 3.2, previous literature on health behavior has established various views on people as actors. It has been noted that both the identification of and response to illnesses are closely linked to cultural beliefs (See for example Adetunji 1991, de Meer et al. 1993). On the other hand, it has been maintained that in general, people use first what is most easily available to them but that in cases of serious illness they are willing to make a greater effort to try something else which might work better (Lasker 1981). Additionally, Susan Reynolds-Whyte (1997) describes the way in which biomedical pharmaceuticals have become folk medicine in Uganda (Reynolds-Whyte 1997). In Lungwena, pragmatism rather than ideological perceptions guided mothers' health seeking behavior: people had accepted modern biomedicine and medications into their normal child health-seeking procedure to the extent that one may say that the medical culture of the Yao is constituted of both locally made and modern medications. Behavioral and cognitive

¹⁰⁹ This owes to Frankel and Lewis: A continuing trial of treatment: medical pluralism in Papua New Guinea (1989).

pluralism describe well the main tendencies of treatment choices. The normal procedure was to treat illness by medicines that were available. Only if an ailment turned out to be chronic, or was perceived as severe, would people consult a diviner, a medical officer or another specialist. This kind of behavior has also been reported from other locations (Leslie 1980, Morris 1986, Mwabu 1986).

Finally, there are two things included in the findings that are worth emphasizing. Firstly there was the notion of "fatalism". These kinds of responses were typical in prolonged illness cases. Also, when pace of expected recovery of specific illnesses was discussed, mothers sometimes explained that some illness cases are not worth treating because children do not get cured anyway. When written in this manner, the mothers' behavior is strikingly fatalist. However, non-treatment may also be set in a broader frame. Ruthbeth Finerman (1990, 1995) has very insightfully analyzed how mothers must balance the treatment needs of sick family members with other household and personal interests. Treatment choices may also be interpreted as constrained by a number of factors such as limited resources or limited knowledge about the various therapeutic resources. Out of the factors guiding child health-seeking, maternal time allocation has attracted most study interest (see Bentley et al. 1995 for references).

There is one more factor that guides child health-seeking in Lungwena worth mentioning. As I explained above, people were aware of the association between poverty and child health on a very general level. In the survey responses about care conventions in urgent cases, money becomes more concrete: 13 mothers (6%) said that they would first have to find money for getting treatment for the child. More generally, if one looks back to chapter 3.1 discussing approaches to child health, mothers of Lungwena obviously count themselves amongs the camp that emphasizes a broader context including economic growth.

10 CHILD HEALTH-SEEKING PRACTICES IN THE BIOMEDICAL GAZE

For this chapter I have examined materials from Lungwena exclusively from a biomedical point of view utilizing disease perspective. In order to assess the survey accounts appropriately, I went through the materials with a medical doctor who has a degree in tropical medicine (Per Ashorn, MD, PhD).

10.1 Concepts of diseases

Chapters 2.2 and 2.4 described the biomedical view of the most common childhood diseases and the leading causes of child mortality in developing countries and in Malawi. It appears initially that mothers in Lungwena were mostly concerned with the same illnesses that are of importance for biomedicine. Importantly, two major health problems that in biomedical thinking are considered to have a great impact on child mortality are missing. The first of them is malnutrition which none of the survey respondents indicated as such. However, 19 (9%) survey respondents reported symptoms that fit severe malnutrition, such as the swelling of the child's body and legs. Yet, in none of these accounts were the symptoms associated with nutrition. Interestingly, Nkhuku et al. (1991) who studied severely malnourished children in another location in Malawi showed that 97% of the mothers did not know that their children were suffering from lack of food.

Another health problem that was not mentioned once by the survey respondents is HIV/AIDS. This is not surprising because in the mid-1990s when the interviews were conducted biomedical HIV/AIDS knowledge amongst Malawians was very low. As I described in chapter 2.4.1, the former president had not allowed public discussion of this theme. Peter Glover Foster (1998) has shown that Malawians generally associated AIDS with fate and divine intervention. According to Foster, the Yao especially believed that witches cause the disease. Along the same lines, no cases of the disease were included in the list of diagnosis at the district hospital. Yet, it has been shown that 18% of the pregnant mothers in the study area were HIV positive (Kulmala et al. 2000b). The prevalence of HIV/AIDS in children is not known, but according to current knowledge, the mother-to-child transmission rate is between 25% and 45% of all children born to HIV-1-infected mothers in Africa (Dabis and Ekpini 2002).

Included in the list of the most common childhood health problems were only three illnesses unacknowledged by biomedicine: sores or rash in the stomach, swelling of testes and painful body. Mogensen (1998) has described mothers' knowledge about stomach rash in Eastern Uganda, while to my knowledge, the other two illnesses have not been reported in previous literature.

On the whole, however, it may be concluded that respondents paid attention to the clinically significant signs of the most common childhood diseases (diarrhea, fever, and cough). Yet, the way mothers attached the symptoms to an illness did not necessarily conform to the biomedical criteria. As I discussed earlier, diagnostic criteria that the mothers relied on, were very general and consisted of several symptoms that would fit many diseases. Consequently, I would rather say that in some illnesses the diagnostic criteria more frequently resembled biomedical criteria than in others. From a biomedical point of view it may be concluded that the sensitivity of the diagnoses was not very good.

Once the preventive measures the mothers reported are looked at with a biomedical gaze, the focus is on their efficacy. Table 38 below shows data coded with this aspect in mind. The proportion of effective modern preventive measures was very low indeed. There was a prevalent perception that there is no prevention for the common child health problems.

Table 39 shows survey data on illness causation coded from a biomedical perspective. Lay knowledge about causation is dominated by traditional elements. Remarks about the causes of childhood health problems that were in accordance with biomedical knowledge were very rare.

Table 38. Biomedical efficacy of preventive measures (n = 817 survey accounts about prevention).

Prevention	n=817	%
No prevention	390	47
Traditional prevention	269	33
Ineffective modern prevention	70	8
Effective modern prevention	49	6
Respondent said that she did not know	30	4
Other	16	2

Table 39. Correspondence of lay knowledge and biomedical knowledge on causation (n = 798 survey accounts about causation).

Causation	n=798	%
She says that she does not know	379	47
Traditional causation	335	42
Standard biomedical causation	55	7
Modern but biomedically incorrect causation	27	3
Other	8	1

Utilization of the term "traditional" in this connection, however, may not do justice to local thinking. I coded almost all careless and unhygienic answers belonging to this category. It must be kept in mind, however, that even if this kind of prevention disagrees with biomedical thinking it is not clear how "traditional" it is as an actual matter of fact. According to the local informants and personnel at the health center, cleanliness and the conception of hygiene are included in the Muslim education at religious classes that women also attend. During the time of the survey people in Lungwena had also been exposed to health education sessions organized by the health survey assistants from the health center. This teaching emphasized, for example, the importance of clean water.

10.2 Treatment of diseases

Table 40 below shows both the first and second treatment options for the diseases classified with biomedical knowledge of efficiency in mind¹¹⁰. Generally it can be said that when estimated like this, a large proportion of treatment looks as inefficient and irrational. The efficiency of treatment increased during the process because in many survey accounts mothers stated that they would collect second treatments at the health center. However, it must be emphasized here that neither the actual efficacy of treatment provided at the health center nor that provided by the local healers has not under systematic scrutiny.

¹¹⁰ In this classification, treatment at the health centre was always interpreted as an appropriate choice for any illness. With other treatment options I used biomedical clinical criteria. For example, Aspirin was considered as an efficient first treatment for fever. If fever related to malaria was treated with Aspirin, I classified it as an inefficient utilization of modern medicines. Homemade oral rehydration therapy was classified as a modern medication and an appropriate treatment for diarrhea even if I cannot verify that the mothers prepare the solution correctly.

Table 40. Biomedical efficacy of treatment of childhood illnesses (n = 790 survey accounts).

Type of treatment	First treatment (n=790)		Second treatment (n=790)	
	n	%	n	%
Effective biomedical treatment	346	44	402	51
Modern but ineffective treatment	158	19	36	4
Local treatment	258	32	155	19
Nothing	18	2	183	22
Local and modern treatment	6	1	5	1
She doesn't know	---	---	3	1
A vague answer	3	1	5	1
Other	1	1	1	1

A matter related to the pace of treatment is the question of delay. In the present material there is no direct answer to this issue. However, the materials indicate that the normal procedure in childhood health problems was to first use medications that were at hand. Only if an ailment turned out to be more chronic would people often say that they would use health center. It may be deduced from this that contact with the health center is delayed due to home treatment.

10.3 Conclusions: biomedical knowledge plays a minor role

The health problems that mothers reported to be common are, according to biomedicine, ordinary but possibly life-threatening conditions. Many of the disease management patterns reported by mothers are likely to have important health implications. It is obvious from the above that when assessed with biomedical criteria, the management of childhood diseases in Lungwena is far from optimal. Firstly, mothers had difficulties in diagnosing the diseases. Secondly, biomedically appropriate knowledge of the prevention and causes of diseases was very low indeed. Consequently, in only about half of the disease cases discussed by the women were discussing during the survey interviews did the ailing child received biomedically effective treatment. The problem in Lungwena, however, does not seem to be a conflict between local knowledge and promotion of "modern" treatment. Instead, the role of incorrectly used modern medication was rather significant.

11 DECISION-MAKING WITHIN THE EXTENDED FAMILY

In the Malawian environment childhood illnesses are not only a medical matter but also a social issue that is of concern to family members. Because family structure regulates decision making within the household, it may have important effects upon child health-seeking and child health. As I described earlier, the norm in matrilineal societies is that the men from the female descent are in charge of the family. However, in the Focus Groups the picture of child health related decisions in Lungwena already gained more depth. Women belittled the men and explained that, quite often, they can act independently or “do as they like”. But the women revealed, if there was a rich man in the family he had to be obeyed. An interesting perspective to the society at Lungwena is to examine child health related decision-making against the rule of men as the principal decision makers.

11.1 Decision makers

In the survey interviews women explained that it was usually the mother alone (n = 143, 70%) or the parents together (n = 16, 8%) who first noticed that there is something wrong with the children. In some families other family members, for example grandmothers (n = 7, 3%) were also the ones to observe first illnesses in children.

According to the cultural rule, the uncle (*mjomba*) is the person who should be kept informed about all family related matters, including also the health status of children. Women said that the main reason for contacting *mjomba* was to show him respect (n = 42, 21%). *Mjomba* was also reached in order to get help, either financial or of other kind (n = 39, 19%). Still, only about every fourth woman (n = 58, 28%) said that they always contacted the *mjomba* when a child was ill.

Similarly, the majority of the women (94/165 = 57.0%)¹¹¹ said that they would start treating the ailing child with the medicines they themselves thought were the most suitable. Some of them consulted other relatives; mainly husbands (17/165 = 10%) and mothers (15/165 = 9%). The data on illness cases that mothers considered to be more serious is shown in table 41 below. Here too, husbands and mothers (grandmothers of the child) are the relatives with whom the mother communicated. Consultation in this context denotes informal discussions rather than formal advice seeking. It also constitutes a verbal acknowledgement that the child is ill.

¹¹¹ This question was not included in the first survey interviews, thus the small total number.

Table 41. Person who is informed in severe childhood illness cases (n = 242 survey accounts¹¹²).

Person who is informed (relationship to the respondent)	n=242	%
Husband	71	29
Mother	60	26
Uncle (<i>mjomba</i>)	27	11
Brother	25	10
Sister	13	6
No-one	12	5
Father	12	5
Mother	8	3
Father of the child	4	1
Other	10	4

11.2 The role of various relatives

Using relevant variables from the questionnaire I counted all the different people who take part in the decision-making process over child health issues. The number varied from 1 to 7 the mode being three people.

In order to examine the rule about the *mjomba* being the crucial person in child health related issues I draw table 42 below. The two left panes of the table show respondents' own perception of the most important person in child health related matters. The series of data in the middle column shows information about the dominant decision maker in the family. It is concluded from eight relevant questions in the survey questionnaire. Usually it was easy to see which of the relatives was the person in charge. Interviewees would indicate it by saying: “he is important because he is the eldest relative”, or “I have to respect my brother because he lives in South Africa and he is the richest in the family”. Thirdly, the data series in the right panes show women's own responses to a question about the most important decision maker in prolonged childhood illness episodes.

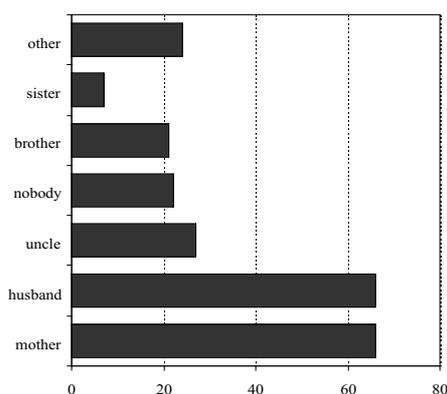
When examined like this, *mjomba's* formal position as the head of the family is acknowledged. This is indicated by the fact that respondents most often report him to be the most important decision maker. In the aggregated data about the dominant decision maker within the extended family husbands and mothers appear as more important than *mjomba*. This is also the case in accounts about actual decision-making situations, especially in prolonged illness cases.

¹¹² The total number is larger than the number of women who attended the survey because some respondents named two relatives who she would inform.

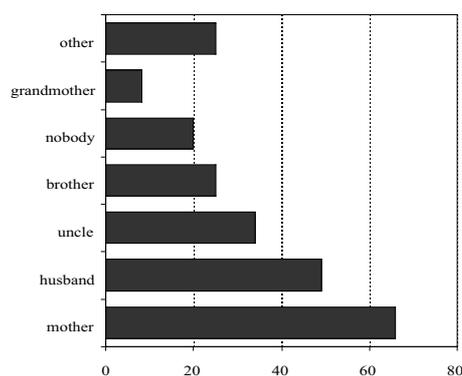
The people whom mothers asked for advice if they were puzzled about child health issues also have an important practical role in childcare. Data on this is presented in the graphs 6 and 7 below. The left panel illustrates the most common advisors in short illness episodes and the right one gives the same data on prolonged diseases. As can be seen, most mothers with a sick child would initially turn to their mothers and husbands for help. Only if the disease lasted longer, would uncles and brothers become more important consultants.

Table 42. The role of various relatives in child health-seeking (data is compiled from several questions in survey interviews).

The most important decision maker (relationship to the respondent)	Self reported by the respondent		Concluded from several questions		Decision maker in prolonged illness cases	
	n=203	%	n=203	%	n=190	%
Uncle (<i>mjomba</i>)	42	21	18	9	23	12
Brother	39	19	16	8	19	10
Husband	34	17	43	21	55	29
Mother	36	17	45	22	38	20
Father	16	9	5	3	4	1
Herself	16	9	4	2	28	15
Sister	12	6	4	2	---	---
Mother-in-law	---	---	---	---	7	4
Grandmother	---	---	4	2	---	---
Grandfather	---	---	1	1	---	---
Mother-in-law	---	---	---	---	---	---
Father of the child	2	1			1	1
Other / not possible to identify single decision maker	2	1	64	30	15	8



Graph 7. Whom women ask for advice when their children get sick (n=233 survey accounts).



Graph 8. Whom women ask for advice if first treatment doesn't help (n=227 survey accounts).

Table 43. Permission to go for treatment outside the home (at the health center or at a local healer) and consent for treatment (data from survey interviews).

Person who gives permission or consent (relationship to the respondent)	Permission for treatment outside the home		Consent for treatment	
	n=266	%	n=220	%
Husband	89	33	49	23
Mother	70	26	77	35
Brother	32	12	25	13
Uncle (<i>mjomba</i>)	27	10	26	12
Sister	10	4	9	4
Father	8	3	10	5
No-one	6	3	1	1
Grandmother	5	2	6	4
Grandfather	---	---	1	1
Other	19	7	16	2

Women had two main reasons for contacting their brothers, uncles and husbands. Firstly, for most of the women money was a rarity and so the men contributed financially if money was needed. Secondly, male family members also helped to choose the type of treatment. If treatment outside the home was needed the husband would frequently contact the uncle and other older relatives to seek advice and permission to go to a traditional healer or a health center.

From the survey interviews (see table 43) it appears that the children's grandmothers (i.e. mothers of the respondents) and husbands again are in an important position. Women stated that often it was up to the husband to go and inform the uncle about serious matters.

The health care setting in Lungwena was discussed in chapter 7.5. It was established that the local health center did not charge user fees. Yet, it was a rather long distance to travel to the health center especially for people whom lived in the uttermost villages. Mothers could not get to the health center without some kind of transportation especially with a bigger child in need of medical attention. In addition to the health center, there were two pay facilities completing the modern health care sector. For most of the population these pay facilities were even further away than the health center. Money was not only needed for the payment of a user fee but also needed for transportation. The local healers also charged considerable sums of money. Sometimes people also traveled long distances for an appointment with a healer.

Therefore, the person providing money for the fees was in an important position in child health-seeking process no matter which of the health care sectors was utilized. From table 44 it appears that payment clearly remained as the responsibility of the husband.

Table 44. Person who takes care of payment at health center or at local healer (n=203 survey interviews).

Person who takes care of payment (relationship to the respondent) ¹	n=203	%
Husband	132	65
Herself	19	10
Brother	17	8
Her mother	14	7
Uncle	7	3
Father of the child	5	2
Father	5	2
Mother	1	1
Other	3	2

Additionally, a significant share of the women (n = 56, 28%) reported that they had sometimes borrowed money in order to have their child treated. Although many of them also mentioned a person from whom they may obtain money for health care expenses if it was needed, it is important to note that households are not always able to generate the finances that are required for child health-seeking.

11.3 Conclusions: “we find our ways”

For most of the people in developing countries in general, but in particular for children, treatment during illness cases is determined principally by decisions made within the household, by the family and especially by the mother. From infancy to adulthood, the family provides (or fails to provide) health care. Several authors have discussed the ways in which the family structure and the responsibilities of family members affects health related behavior. Works related to the African context include John Janzen (1978) and Steven Feierman (1985). The message of these studies is that the family is the interface where different childcare options interact. In general, decisions about child health-seeking are typically made amongst several family members; there is no individualistic decision making.

The role of family the network is twofold: Firstly, in Lungwena, like in so many other locations, childhood illnesses require social, economic and practical support from family members. Most of the women who were interviewed did not have direct access to financial resources or other kinds of resources. Therefore, getting things done was a question of mobilizing other members of the extended family. Actions taken during illness episodes

depend largely on the support available for the mothers. The support system includes several members of the extended family. In the case of financial support, the husband and *njomba* became crucial. This finding corresponds with earlier studies on the importance of family members. (Mogensen 1998, Hampshire 2002) Similarly, Orubuloye et al. (1991) have shown that the person who takes care of payment has a say in the health-seeking process.

Secondly, most women in Lungwena lack formal education. Therefore, the main influences on their child health-seeking behavior come from social networks: from friends, neighbors but first and foremost from various relatives

Additionally, child health seeking appears as an interesting part of family dynamics where cultural norms and practices are encountered. In a previous study conducted amongst both matri- and patrilineal people in Malawi it was found that matters related to family health are decided by men in 67% of the families, in 12% by women, and together in 21% of the families.¹¹³ In Lungwena, *mjomba* is granted his honorary position. The role of husbands' appears to be more important than the cultural rule indicated. Also mothers (grandmothers of the children) had a significant role in relation to all aspects of decision making except in paying. But all in all, men are obviously in an important position in relation to child health.

As a whole, however, decision-making allows more nuance of meaning than the cultural rules would initially suggest. Mothers themselves stated that they were skilled in manipulating situations towards the well being of their children. In Focus Group discussions women used the expression “we find our ways” several times.

¹¹³ Figures are drawn from an unpublished report titled The situation of children and women in Malawi, Government of Malawi and Unicef (1987).

12 REMARKS ON THE MOST COMMON CHILDHOOD HEALTH PROBLEMS

This section examines the management of diarrhea, fever, malaria, cough and eye problems in detail. These are the illnesses that mothers reported to be the most common in Lungwena. During the survey, more than 50 accounts of each of them were collected. Rather than examining some of the more uncommon health problems I chose to focus on the entities that are frequent according to local respondents. Biomedicine also considers these diseases as important health problems. The text expresses the respondent's knowledge of the illnesses while using material based reading. The parallel biomedical reading discloses disease perspective.

12.1 Diarrhea

From a biomedical point of view, diarrheal diseases are the leading cause of infant and early childhood mortality in Sub-Saharan Africa. The main causative organisms are three types of micro-organisms: bacterial, viral or parasitic (van Ginneken and Teunissen 1992). Bacterial pathogens, however, are a more important cause for these diseases in countries with poor hygienic conditions than in more developed countries. (Kirkwood 1991, Vesikari and Torun 1994) Standard biomedical prevention of diarrhea operates on the notion of contamination. In developing countries, diarrhea is often complicated by malnutrition, which consequently reduces resistance to infections (Mull and Mull 1994). However, there is a general consensus that the large majority of diarrheal episodes can be easily and inexpensively handled at the household level. Oral rehydration therapy (ORT) is an effective and inexpensive way of treating dehydration and preventing deaths due to diarrhea. (Hounsa et al. 1993, Hudelson 1993, Vesikari and Torun 1994)

In the Lungwena survey, diarrhea was the illness that women mentioned most often: 147 (72%) mothers included it in the list of the five most common childhood illnesses. On the other hand, knowing that diarrhea was very common in the area, many mothers still did not see it as problematic. An explanation that I received from the women sounds plausible: diarrhea in children is just an ordinary nuisance; usually it is not worth worrying about.

Respondents diagnosed diarrhea based on the physical manifestations. However, 31 respondents added another symptom to it, most often fever (8 remarks) or sunken eyes and

sunken fontanel (7 remarks). Thus, the local *m'matumbo mwakugula* covered a wider range of conditions than the initial translation would suggest.

During the survey, 154 remarks on the prevention of diarrhea were recorded. Table 45 below shows that many mothers said that there was nothing they could do in order to prevent diarrhea in their children. Those who mentioned preventive actions relied mainly on good care and cleaning, the measures that were already discussed earlier. It is worth noting that particularly in the case of diarrhea some local and biomedical perceptions about prevention (and also on causation) overlap. An example of this kind of knowledge are food and drink related precautions such as storing foodstuffs covered and the boiling of drinking water.

Respondents' answers about causes of diarrhea are depicted also in table 45. Descriptive of the survey accounts is a self-reported lack of knowledge: women said that they did not know what caused diarrhea. Those who named a cause typically blamed diarrhea on a lack of cleaning and proper childcare. In the Focus Groups mothers explained that they weaned babies as soon as they realized that they were pregnant for the fear that

Table 45. Two readings of prevention and causation of diarrhea as it appears in the surveys¹¹⁴

Material based reading	n=154	%	Biomedical reading	n=154	%
<u>Prevention</u>			<u>Prevention</u>		
nothing	61	40	nothing	61	40
care and cleaning	40	27	traditional prevention	48	31
food or drink related	27	18	standard biomedical prevention	22	15
collect prevention from health center	8	5	modern but inefficient prevention	16	10
use pit latrine	7	4	other	7	4
other	9	6			
<u>Causation</u>			<u>Causation</u>		
	n=153	%		n=153	%
respondent said she doesn't know	59	39	respondent said she doesn't know	59	39
lack of care and cleanliness	43	28	traditional causation	64	42
food or drink related	25	16	standard biomedical causation	24	16
God	8	5	modern but inappropriate causation	6	3
diarrhea is part of childhood	6	4			
mother's / father's behavior	3	2			
other	9	6			

¹¹⁴ Reading instructions for tables 45-68: The logic of presentation is the same in all these tables containing data about the most common health problems. The left pane presents material based reading in which the classification is directly based on the expressions the interviewees used. The right pane is based on the reading of the interview accounts with a biomedical criterion. The total number (n) that is expressed, denotes the number of times prevention, causation and treatment of the health problem was mentioned.

the baby would suffer from diarrhea. It was a commonly held fear that pregnancy makes the milk sour and babies get diarrhea. Nkhuku et al. (1991) have reported the same finding from other locations in Malawi and Mogensen (1998) in other parts of Africa.

The variety of treatment for diarrhea is examined the table 46 above. Mothers applied a great diversity of methods. Local medications were used frequently but quite a few of the women were also aware of the idea of ORS. It must be noted, however, that there is no information on whether the respondents knew the right proportions of salt, sugar and water. Given that all of the remarks on the salt and sugar solution would indicate the right use of ORS, about half of the diarrhea cases in Lungwena received biomedically appropriate medication.

Table 46. First and second treatment for diarrhea as it appears in the surveys.

Material based reading	n=147	%	Biomedical reading	n=147	%
<u>First treatment</u>			<u>First treatment</u>		
local medicine (not specified)	40	26	standard biomedical treatment	75	51
ORS / wapaketi (from a packet)	35	23	local treatment	51	35
boil sugar and salt in water	24	16	modern but inefficient treatment	16	11
medicine from health center	15	9	nothing	3	2
pills / capsules from shop	9	5	other	2	1
boil roots	4	3			
medicine from bark of trees	3	2			
African bitter medicine	3	2			
antibiotics	2	2			
liquid from shop	2	2			
pills and ORS	2	2			
drip at the health center	1	1			
boil salt	1	1			
guava leaves	1	1			
leaves and salt	1	1			
liquid and pills	1	1			
local healer	1	1			
white peoples medicine	1	1			
pills from health center	1	1			
<u>Second treatment</u>			<u>Second treatment</u>		
medicine from health center	67	46	standard biomedical treatment	77	52
local medicine (not specified)	34	23	local treatment	37	25
nothing	32	22	nothing	32	22
boil sugar and salt in water	5	3	modern but inefficient treatment	1	1
local healer	5	3			
pills / capsules from shop	3	2			
ORS + wapaketi (from a packet)	1	1			

The mothers' responses in prolonged diarrhea episodes when a second treatment course was needed, is examined in the same table. A great proportion of the respondents said that they would go and collect medicine from the health center only if home-administered preparations did not help. A considerably number of mothers said that they would not try any second way of treating the child. These non-action answers were not related to the type of the first treatment respondents had indicated.

12.2 Fever

Biomedicine regards fever as the result of an active increase in metabolic activities in the body, and the decrease in the processes, which diminish body heat. It has been shown in the industrialized countries that parents tend to regard the appearance of fever with more concern than physicians (Leiser et al. 1996).

In the survey material, *chilu kolesya moto*, hot body, was the second most often reported child health problem (n = 93, 46%). Key informants and research assistants translated this condition as fever. Not surprisingly, fever was usually diagnosed based on immediate bodily conditions (85/93, 91% fever accounts). Respiratory problems were also combined with *chilu kolesya moto* (7 accounts). One mother said that children with fever have fallen fontanel. It is worth noting, that *chilu kolesya moto* was also attached to many health problems as a symptom.

In more than half of the survey accounts of fever, mothers indicated that they couldn't prevent fever in their children (see table 47). Here again, the main preventative actions were related to proper caring and cleaning. None of the preventive measures was in accordance with biomedical thinking.

In their own assessment, knowledge about the causes of fever amongst mothers in Lungwena was very poor: table 47 below indicates that more than half of the interviewees said that they do not know why their children get fever. Lack of good childcare and cleanliness as well as God's will were often mentioned. In a biomedical reading I did not find any account of an appropriate causation of fever.

Table 47. Prevention and causation of fever as it appears in the surveys.

Material based reading	n=100	%	Biomedical reading	n=100	%
<u>Prevention</u>			<u>Prevention</u>		
nothing	54	54	nothing	54	54
care and cleaning	24	24	traditional prevention	31	31
collect prevention from health center	5	5	modern but inefficient prevention	11	11
use pit latrine	5	5	respondent said she does not know	3	3
proper sexual behavior	4	4	other	1	1
food or drink related	3	3			
respondent said she does not know	3	3			
other	2	2			
	n=93	%		n=93	%
<u>Causation</u>			<u>Causation</u>		
she says she does not know	50	54	she says she does not know	50	54
lack of care and cleanliness	19	20	traditional causation	39	42
God	10	11	modern but inappropriate causation	2	2
dust, sun, wind	6	7	other	2	2
mother's / father's behavior	2	2			
diarrhea as normal part of childhood	1	1			
other	5	5			

According to the mothers' reports, they often treated fever in their children with modern medications (see table 48). In a biomedical reading, medications that lower fever were considered as a correct treatment option. With this criterion a rather high share of children received appropriate treatment. If, however, fever is considered as a sign of malaria as should be done in a malaria endemic environment, the picture changes (see discussion on malaria below).

Interestingly, during the course of a treatment process, the share of efficient modern medication for fever appears to decline (see table 48). This is mainly due to the fact that many mothers said that there is no other treatment option for fever. Amongst mothers who held this opinion were an equal number of those who had first given local medications a trial on and those who had used commercially manufactured products.

Table 48. First and second treatment for fever as it appears in the surveys.

Material based reading	n=93	%	Biomedical reading	n=93	%
<u>First treatment</u>			<u>First treatment</u>		
Aspirin	52	56	standard biomedical treatment	64	69
pills	11	13	modern but inefficient treatment	16	17
Cafenol, Fansidar	9	10	local treatment	11	12
medicine made from a tree	6	6	other	2	2
pills from health centre	4	4			
local healer (mauka)	3	3			
cover child with wet cloth	3	3			
penicillin	1	1			
chloroquine	1	1			
other	3	3			
<u>Second treatment</u>			<u>Second treatment</u>		
pills from health center	44	47	standard biomedical treatment	52	56
nothing	15	16	local treatment	18	19
medicine made from a tree	14	16	nothing	15	16
Cafenol, Fansidar	7	8	modern but inefficient treatment	7	8
pills	3	3	other	1	1
local healer (mauka)	3	3			
traditional healer	2	2			
other	2	2			
Fansidar	1	1			
penicillin	1	1			
chloroquine	1	1			

12.3 Malaria

In the last 20 years biomedical strategies for malaria have shifted from an emphasis of eradication to an emphasis on control with a focus on prompt treatment (McCombie 1996). From a biomedical point of view, malaria is a constant health problem in Lungwena. However, microscopy services for determining malaria parasites in the blood are not available locally. Rather surprisingly, only about every third survey respondent (n = 73, 37%) reported malaria to be a common health problem in their children. An illness that mothers diagnosed as *malungo* was manifested as fever (30 accounts), the child shivering (21 accounts), or both fever and shivering (14 remarks). Additional symptoms that were associated with *malungo* were, for example, inability to walk (8 accounts), general weakness (4 remarks) and convulsions (2 remarks).

Table 49 below is based on the 82 accounts of malaria prevention included in the survey material. Care and cleaning were the options that were mentioned most frequently,

even more often than “not knowing”. Only one of the respondents mentioned avoidance of mosquito bites, an approach that may be considered as appropriate modern biomedical prevention.

The same table indicates that many survey respondents were of the opinion that they did not know the causes of malaria. Here again, lack of cleaning and caring was the predominant line of reasoning. With a biomedical gaze, most of the answers about causation of malaria were traditional. However, four respondents named mosquitoes as the causative agent for the disease.

As table 50 shows, the treatment of children's malaria cases was predominantly based on Western medications that were purchased from various places or obtained from the health center. Only a little more than half of the treatment procedures, however, were in accordance with biomedical guidelines. It is seen from the table, that the share of biomedically correctly treated malaria cases grew higher if the disease episode was prolonged. This is attributable to the fact that quite a few mothers said that they would seek medicines at the health center if the first treatment trial failed. Here again, the number of mothers reporting non-action is rather high.

Table 49. Prevention and causation of malaria as it appears in the surveys.

Material based reading	n=82	%	Biomedical reading	n=82	%
<u>Prevention</u>			<u>Prevention</u>		
care and cleaning	39	48	traditional prevention	39	48
nothing	30	37	nothing	30	37
she says she does not know	4	6	modern but inefficient prevention	9	12
collect prevention from health center	3	3	standard biomedical prevention	1	1
use pit latrine	3	3	other	1	1
food or drink related	2	2			
other	1	1			
	n=75	%		n=75	%
<u>Causation</u>			<u>Causation</u>		
she says she does not know	29	39	traditional causation	37	50
lack of care and cleanliness	25	33	she says she does not know	29	41
dust, sun, wind	8	11	standard biomedical causation	4	5
mosquitoes	4	5	modern but inappropriate causation	3	4
God	3	4			
food or drink related	2	3			
other	4	5			

Table 50. First and second treatment for malaria as it appears in the surveys.

Material based reading	n=75	%	Biomedical reading	n=75	%
<u>First treatment</u>			<u>First treatment</u>		
a specified malaria drug	19	25	standard biomedical treatment	39	52
pills from health centre	18	24	modern but inefficient treatment	33	45
specified drug (Aspirin, Cafenol, Panadol)	16	22	nothing	1	1
pills (not specified)	9	12	local treatment	1	1
pills from shop	8	11	other	1	1
malaria drug, not specified	3	4			
local healer	1	1			
nothing	1	1			
<u>Second treatment</u>			<u>Second treatment</u>		
pills from health center	33	44	standard biomedical treatment	37	49
nothing	24	32	nothing	24	32
pills	7	9	local treatment	8	11
local healer	3	4	modern but inefficient treatment	4	5
she says that she does not know	2	3	other	2	3
local medicine tied around neck	2	3			
private hospital	2	3			
chloroquine	1	1			
penicillin	1	1			

12.4 Cough

Cough, *kosomola*, was considered to be a common child health problem by 72 (35%) survey respondents. As anticipated, diagnosis of a cough was based on coughing (66 / 72 cough accounts, 92%). Some respondents, however, added another symptom to the cough. According to the women, children also tend to have breathing related symptoms, fever and mouth sores. This brings the meaning of *kosomola* close to what in biomedical terms is considered to be as acute respiratory infections (ARI). In biomedical clinical practice ARI cases are relatively simple to handle: it has been estimated that 98% of deaths due to ARI could be prevented with appropriate case management including the administration of antibiotics and immunization against diseases which increase the risk for it (Chand and Bhattacharyya 1994, Mull et al. 1994, Nichter and Nichter 1994). Most ARI deaths are attributed to pneumonia. The nature of pneumonia makes health programs designed to reduce mortality from pneumonia particularly dependent on health-seeking behavior because a child's condition can deteriorate rapidly. (Hudelson et al. 1995, McNee et al.

1995) Additionally, it is rather difficult to differentiate between signs and symptoms that require hospitalization and pneumonia, which is treatable with antibiotics at home (Simon et al. 1996).

Table 51 below indicates that mothers typically expressed an ignorance of cough prevention. Interestingly, several respondents associated coughs with pit latrines. The same table contains data about lay knowledge of the causes of coughs. Besides the usual “not knowing” and concern about cleanliness, natural phenomena are seen as important causes for coughs. Women also mentioned God in this connection. Reasoning that would be in accordance with biomedical thinking was totally non-existent.

Table 52 indicates that a cough was typically treated with local medications. Several women specified that for coughs, the leaves of a blue gum tree were the most effective treatment. Women would boil the leaves in water and the child drank the liquid. Here again mothers said that coughing is such an unavoidable condition that there really was not much use in treating. However, commercially manufactured cough mixtures were also used frequently.

If the child continued to cough many mothers said that they would pay a visit to the health center, thus the great proportion of correct modern treatment (see table 52). There were also many other methods of treatment that the respondents thought of as useful.

Table 51. Prevention and causation of cough as it appears in the surveys.

Material based reading	n=75	%	Biomedical reading	n=75	%
<u>Prevention</u>			<u>Prevention</u>		
nothing	40	53	nothing	40	53
care and cleaning	21	28	traditional prevention	25	33
use pit latrine	5	8	modern but inefficient prevention	5	7
she says she does not know	4	5	she says she does not know	4	6
other	5	6	other	1	1
<u>Causation</u>			<u>Causation</u>		
she says she does not know	41	57	she says she does not know	41	57
lack of care and cleanliness	15	21	traditional causation	30	42
dust, sun, wind	9	12	modern but inappropriate prevention	1	1
God	5	7			
other	2	3			

Table 52. First and second treatment for cough as it appears in the surveys.

Material based reading	n=72	%	Biomedical reading	n=72	%
<u>First treatment</u>			<u>First treatment</u>		
local medicines, general expression	28	39	local treatment	38	53
cough mixture	12	17	standard biomedical treatment	21	29
boil leaves of bluegum tree	10	14	modern but inefficient treatment	12	17
Gentian Violet (antibacterial liquid)	5	8	other	1	1
pills or liquid from from health center	4	5			
Chloroquine	4	5			
Conjex	4	5			
pills from grocery store	2	2			
Aspirin	1	1			
vinegar	1	1			
she is very vague	1	1			
<u>Second treatment</u>			<u>Second treatment</u>		
go to health center	42	59	standard biomedical treatment	41	59
local medicine (general expression)	10	15	local treatment	14	19
nothing	9	13	modern but inefficient treatment	8	11
medicine from a tree	3	4	nothing	8	11
Gentian Violet (antibacterial liquid)	2	3	other	1	1
Conjex (ointment rubbed on skin)	1	1			
pills	1	1			
she is very vague	1	1			
Cafenol (painkiller)	1	1			
pay hospital	1	1			
injection from market	1	1			

12.5 Eye problems

Children's eye problems are not often considered to be of special interest in primary health care in developing countries except in areas with onchocerciasis (river blindness). All of the 61 (30%) respondents who reported eye problems as a common childhood illness described it as the child's eyes becoming red with white discharge. In the Yao language this was called *m'meso*, eyes. Only a few respondents mentioned other symptoms such as fever and headache in relation to *m'meso* (2 remarks both).

Table 53 below shows that more than half of the mothers who talked about eye problems felt helpless and said that they cannot prevent *m'meso*. Of interest here is that the care and cleaning category here, coincides with biomedical perceptions about prevention in cases when mothers say they try to wash their children's faces often enough.

Table 53. Prevention and causation of eye problems as it appears in the surveys.

Material based reading	n=62	%	Biomedical reading	n=62	%
<u>Prevention</u>			<u>Prevention</u>		
nothing	33	53	nothing	33	52
care and cleaning	19	31	traditional prevention	16	29
collect prevention from hospital	5	8	modern but inefficient prevention	6	9
use pit latrine	2	3	standard biomedical prevention	6	9
she says she does not know	1	2	other	1	1
other	2	3			
	n=63	%		n=63	%
<u>Causation</u>			<u>Causation</u>		
she says she does not know	30	49	she says she does not know	30	49
lack of care and cleanliness	11	17	traditional causation	25	31
flies	12	17	standard biomedical causation	6	10
dust, sun, wind	3	5	modern but inappropriate causation	1	2
God	2	3	other	1	2
other	5	9			

According to the mothers, there is little knowledge about the causes of eye problems (see table 53). The usual elements of discourse included caring, cleaning, flies and natural phenomenon such as dust, sun and wind.

Table 54 below reveals that mothers in Lungwena preferred to apply commercially manufactured eye ointments if they observed eye problems in their children. Women explained that they would first try to borrow ointment from neighbors. Only after that would they buy a bottle or go to the health center.

If a child's eye problems persisted for a longer period, a considerable number of mothers said that they would pay a visit to the health center, as table 54 below indicates. However, if home administered eye ointments did not help, more than one third of women gave up treatment.

Table 54. First and second treatment for eye problems as it appears in the surveys.

Material based reading	n=61	%	Biomedical reading	n=61	%
<u>First treatment</u>			<u>First treatment</u>		
eye ointment from shop, health center or neighbor	40	66	standard biomedical treatment	46	75
local medicine (general expression)	7	12	local treatment	6	10
health center	7	12	modern but inefficient treatment	5	8
nothing	3	5	nothing	3	5
injection from market	1	2	other	1	2
ORS powder	1	2			
breast milk into the eyes	1	2			
penicillin	1	2			
<u>Second treatment</u>			<u>Second treatment</u>		
health center	26	44	standard biomedical treatment	26	44
nothing	22	36	nothing	22	36
local medicine	9	16	local treatment	11	18
local healer	1	1	modern but inefficient treatment	1	1
eye ointment from shop	1	1	other	1	1
injection from market	1	1			
local healer	1	1			

12.6 Headache

As I will discuss towards the end of this chapter, children's headaches in developing countries has been examined in biomedical literature mainly in connection with a clinical picture of malaria (White 1991). According to the Lungwena mothers, headaches as such were rather common: almost one third of the survey respondents (n = 59, 29%) included it in the list of the common child health problems. From a research perspective headaches are an interesting topic because there is no direct method for verifying the sensation of pain. Survey respondents based their diagnosis on the existence of head ache in children on several symptoms. Most often they mentioned that nerves or veins show on the temples (14/91 symptoms, 15%) and that the child's head is hot (12/91, 13%). Diagnosis was also based on fever, discharge from eyes and crying (each was mentioned 10 times).

According to the great majority of survey accounts of headaches, it was an illness with no prevention (see table 55). Still, some mothers said that they wash and clean in order to prevent the problem. In line with the answers about prevention, a great majority of respondents who reported headaches as an important child health problem said that they did not know the causes of it. Only a few of the respondents relied on the usual cleaning and caring measures. God played an important role in reasoning related to headaches.

Table 55. Prevention and causation of headache as it appears in the surveys.

Material based reading	n=60	%	Biomedical reading	n=60	%
<u>Prevention</u>			<u>Prevention</u>		
nothing	42	70	nothing	42	71
lack of care and cleanliness	7	12	traditional prevention	10	17
health center	3	5	modern but inefficient prevention	3	5
use pit latrine	2	3	standard biomedical prevention	2	3
a reference to proper behavior	2	3	other	3	4
other	4	6			
	n=59	%		n=59	%
<u>Causation</u>			<u>Causation</u>		
she says she does not know	42	71	she says she does not know	42	71
care and cleaning	7	12	traditional causation	16	27
God	5	8	modern but inappropriate causation	1	2
dust, sun and wind	2	3			
normal part of childhood	1	2			
other	2	4			

Table 56. First and second treatment for headache as it appears in the surveys.

Material based reading	n=59	%	Biomedical reading	n=59	%
<u>First treatment</u>			<u>First treatment</u>		
Aspirin	18	30	standard biomedical treatment	27	46
local medicines (generally)	13	22	local treatment	27	46
Cafenol	9	16	modern but inefficient treatment	4	7
local healer (mauka)	7	12	other	1	1
tatoos	4	6			
medicine back tied around neck	3	5			
pills	3	5			
eye ointment	1	2			
medicine from health center	1	2			
<u>Second treatment</u>			<u>Second treatment</u>		
medicine from health center	29	49	standard biomedical treatment	29	49
local medicines, general expression	10	17	local treatment	18	31
nothing	8	14	nothing	8	13
tatoos	4	7	modern but inefficient treatment	4	7
pills	4	7			
another healer	3	5			
penicillin	1	1			

During the informant interviews I learned that, according to the mothers, management of headaches was especially tricky. Table 56 above reveals that respondents considered various local and modern options as worth trying. The rather high share of biomedically appropriate treatment is explained by the fact that I coded painkillers as an effective medication. Here again, as the table shows, if the child did not get cured with the first treatment women reported that only then they would seek medicine at the health center. Yet, still quite a few mothers turned to local care options (17/59 = 29%).

12.7 Conclusions: self-reported lack of knowledge

The six illnesses that mothers reported to be the most common in Lungwena were discussed at length above. The main aim of the examination was to show in detail the variety of responses mothers reported and a biomedical assessment of them. The success of a biomedically appropriate treatment strategy for these diseases depends heavily on the behavior of caretakers.

According to their own opinion, mothers do not have much knowledge of prevention or causation of these health problems. Despite that, they described a large variety of treatment measures. According to the interviews practically all of these illnesses in children evoked some kind of action. However, a few diarrhea, malaria and eye problem cases were left completely untreated. With a little variation between the illnesses, appropriate biomedical treatment was used as the first response in roughly half of the illness cases. The share of inefficient modern treatment was alarmingly high especially for malaria: in 44% of the malaria accounts, mothers stated that they first treated the child with a modern medication other than a malaria drug. On top of this are the malaria cases that are diagnosed as ordinary fever.

If illness episodes prolonged many respondents explained that they would go to the health center, which I classified as a biomedically appropriate action. However, the share of biomedically correctly treated illness cases did not increase during a prolonged disease episode because non-action grew to a considerable level and varied from 11% for coughing to 34% for eye problems.

Finally, a remark about the limitations of a disease-illness based approach is needed. Both mothers in Lungwena and biomedical textbooks on the management of childhood diseases typically approach health problems as separate entities. In clinical practice, however, the above-discussed common diseases cannot be separated. Firstly, it is estimated that in Africa, 40% of fever cases are due to malaria. In such areas where laboratory

facilities are limited, the main strategy for reducing morbidity and mortality is presumptive treatment of fever. Thus, all fever cases should be considered as a bout of malaria. (McCombie 1996, Tanner and Vlassoff 1998) Also, headache should be considered as a symptom of malaria (White 1991). Secondly, in biomedical practice both cough and fever are considered to be symptoms of ARI. Thirdly, as discussed in chapter 2.2.1, more than one child health problem is typically present simultaneously in developing countries.

13 THE ASSOCIATION OF HEALTH-SEEKING WITH CHILDHOOD MORTALITY

The main empirical goal of the present research was to describe child health-seeking in Lungwena. Moreover, the survey data allows some analytical examination of health-seeking variables in relation to child survival. In addition to variables directly depicting child health-seeking, selected family characteristics and contextual factors were included in the analysis. According to the epidemiological tradition, statistically significant associations will be the focus of interest. Notwithstanding the epidemiological way of delimiting findings, sometimes even more meaningful for the analysis are variables that remain without association. This is especially the case in the present study setting. Therefore, the lack of association is included in the discussion in the conclusive section towards the end of the chapter.

13.1 Data and statistical methods

Chapter 6.3 described data collection in detail. The analysis to follow derives its conclusions from 164 interviews of individual mothers¹¹⁵. Based on the interviews, I constructed a database with a row for each child. Thus, the total number of rows is 817 equalling the amount of children mothers reported on. Information for all of one mother's children is similar except to the variables with information on child survival, stating whether the child is dead or alive and birth order. Thus, the unit of analysis is a child and the dependent variable is mortality, whether a child was alive or dead.¹¹⁶

¹¹⁵ Only such interviews that contain full information on births and deaths are analysed. I left out of analysis 39 interviews after which demographic questions were slightly rephrased. However, the percentages of children who were alive and who were dead are exactly the same in the data that is analysed and in the excluded material.

¹¹⁶ As I explained in the materials section, the data was collected by interviewing mothers. Thus a viable alternative for analysis would have been to use a mother as the unit. With this aspect in mind and also in order to check the integrity of the results, I also formulated another database with a key figure for each respondent. A key figure was calculated as follows: $100 * (\text{dead children} / \text{total number of children})$. For example Majumder and Islam (1993) have used this kind of child survival index in their analysis.

I used a key figure as the dependent variable in the analysis because it summarizes the proportional share of childhood deaths in a lot of the children of a mother. Respondents who had the highest key figure had lost all of their children. The problematic aspect of this kind of key figure is that a mother who has lost 1 out of 1 child gets the same key figure as a mother of ten who has lost all of her children. The results were identical with both data sets and thus the text is based on data analysis based on children's survivorship.

I entered the data using EpiInfo (version 6.02) and Microsoft Excel (version 7.0 for Windows). I assessed bivariate associations by using SPSS (version 9.0 for Windows) and EpiInfo. For categorical variables I ran simple cross tabulations and tested statistical significance with a chi-squared test. For continuous variables that I did not want to classify for lack of sensible limits for categories, I compared group means and tested the statistical significance with a t-test. Results are reported as odds ratio (OR)¹¹⁷ with a 95% confidence interval (CI) and p-value¹¹⁸.

The analysis of association is organized under three broad themes according to the independent variable: social network measures, treatment practices of childhood illnesses and contextual factors.

Additionally, I conducted multivariate logistic regression¹¹⁹ analysis in order to examine whether some of the factors that showed association at a significant level in the bivariate analysis were independently associated with childhood mortality. Results are reported as adjusted odds ratio (AOR) with 95% CI and p-value.

13.2 Dependent variable: childhood mortality

In the light of the present interview material, childhood deaths in Lungwena were very common. The 164 mothers whose data is used in analysis reported a total of 817 children born to them. By the time of the interviews, 265 (32%) of the children had died and 552 (68%) were alive.

For a statistical analysis, figures based on the present data must be interpreted with caution. A first remark related to the quality of data concerns terminology. As a

¹¹⁷ Odds ratio is used for comparing risk with different exposures and outcome in a setting when information about all the population at risk is not available. Odds ratios are also commonly used in studies to describe the likely harm an exposure might cause. (Giesecke 1994) An odds ratio is calculated by dividing the odds in the exposed group by the odds in the control group. In the present material, I first identified a reference category for each for each variable. The reference is typically that with the lowest odds. This category was given reference value one and it was used for calculating the odds ratios for the other categories. An odds ratio greater than one signifies a risk factor.

¹¹⁸ P-value summarizes the evidence about null hypotheses in the data. A moderate to large P-value means that the data is consistent with null hypothesis (H_0). If the P-value is sufficiently small, H_0 is rejected. (Agresti and Finlay 1997) In the present analysis the commonly given $p < 0.05$ level was used to indicate a statistically significant association.

¹¹⁹ Logistic regression is an appropriate method for analysis once a binary dependent variable is used in a model. It is a generalisation of the chi-squared test to examine the association of a binary-dependent variable with one or more independent variables, which can be binary, categorical or continuous. (Campbell 2001)

consequence of matters that will be touched on below, it is not feasible to calculate the commonly given under-five mortality rate (U-5 MR) from the present data. U-5 MR refers to deaths that have occurred exactly during the first five years of life. Instead, I prefer to use the term childhood mortality referring to all child deaths that mothers reported.

Pertinent to the quality of data is the cross sectional study design and the fact that the data is based on mothers' reports. In retrospective data, there is always an inherent possibility of reporting errors. It became obvious during the interviews that some women with many children were not sure if they remembered all events related to their children correctly. As an attempt to overcome this, two sets of questions covering parity were included in the interviews. First, the mothers were simply asked to report the number of births and deaths, number of children whom were alive and the ages of the oldest and the youngest child. In the second set of questions mothers listed their children one by one. If they had difficulties in giving a list of children or if there was any inconsistency between the two sets of information, research assistants verified the data by discussing with the interviewee and sometimes other women in the neighborhood. Because most of the women had lived in the same location all of their lives, a conclusion was reached with the help of neighbors.

A second major concern with the data is the inaccuracy of the dates of childhood events. This is also partly related to the cross sectional study design and partly to other factors like low the literacy rate and confusion caused by the Islamic and Christian chronology. So, many mothers specifically pointed out that they did not know the year of birth or death or the ages of the children. Likewise, they did not know their own age. When they were asked about a child's age or when (s)he died, mothers typically referred to the development stages. For example, they described that the child died just after (s)he had learned how to crawl, to sit in an upright position or to walk. From this, I estimated the child's age with the help of the research assistants.

Additionally, it is known that the majority of deaths in Malawi occur in children aged less than five years old. Estimations vary from one third to 57% (UN in Malawi and GOM 1993, WHO 1993). Therefore, it is very likely that a great majority of the deaths reported by Lungwena mothers happened to children under five years old. Reliability of these figures is also supported by a finding in a birth cohort in Lungwena that confirmed the under-three-year mortality rate to be 202 / 1000 live births, which is roughly the same as the present data (Ashorn P et al. 2002). The mortality ratio calculated from the present data may even lead to a slight underestimation because many of the children reported to the study had not reached the age of five. Thus, they still face a risk of death before their fifth

birthday. All in all, despite the obvious inaccuracies there is no systematic bias in the childhood mortality data.

13.3 Analysis of association between independent variables and childhood mortality

Appendix 4 lists all the variables that were included in the analysis of association of the survey data. Below, I mainly will confine the discussion to statistically significant associations.

13.3.1 Social network measures

Independent variables of the main interest in the present study are based on data that describes mothers' social network. The main themes that were covered include:

- decision making,
- consultation, and
- financial expenses.

Decision-making

Children do not decide treatment of illnesses on behalf of themselves but grown up people are in a position to direct action. Decision-making structures and rationales vary between societies and locations. Therefore, in the course of the survey interviews the involvement of various members of the extended family in decision-making was examined.

The original research hypothesis for the present study was based on the assumption that in those families where a maternal uncle, *mjomba*,¹²⁰ has a powerful say over children, the health-seeking process is not as effective as it would be if mothers were in charge of it. I based this assumption on two premises. Firstly, I expected that *mjomba*, who is usually an elderly man, would opt for local treatment more often than the mothers. Secondly, because of the matrilineal family structure *mjomba* did not necessarily live in the same village as the

¹²⁰ I described matrilineal and matrilineal family structure in Lungwena and the important role of maternal uncle in chapter 7.2.

respondent and her children. In the Lungwena context, it would take time to reach him. I assumed that this would delay the treatment process and cause excess mortality of children.

Analysis of decision-making revealed a more complex picture than this. Bivariate analysis of data collected with questions about decision-making is shown in table 57 below. A number of decision-making variables are associated with childhood mortality. The role of the uncle was indeed crucial for childhood mortality, but the association was mainly in the opposite direction than what I had presumed.

Table 57. Bivariate associations between primary decision-maker and childhood mortality.

Decision making	total	deaths	alive	odds ¹²¹	OR ¹²²	CI ¹²³	p ¹²⁴
The most important decision maker in child health decisions (self reported)							
respondent's uncle (<i>mjomba</i>)	156	42	114	0.37	ref		
respondent's husband	146	38	108	0.35	0.96	0.55-1.64	0.860
respondent's mother	100	31	69	0.45	1.22	0.68-2.20	0.481
respondent's father	59	25	34	0.73	2.00	1.02-3.91	0.029←
respondent's brother	160	50	110	0.45	1.23	0.74-2.07	0.397
respondent's sister	61	22	39	0.56	1.53	0.78-3.01	0.184
other relatives	56	23	33	0.67	1.89	0.95-3.76	0.049←
respondent herself	79	34	45	0.75	2.05	1.12-3.77	0.013←
Dominating decision maker in child health decisions (data aggregated from several questions)							
respondent's uncle (<i>mjomba</i>)	78	14	64	0.22	ref		
respondent's husband	233	85	148	0.57	2.63	1.34-5.23	0.002←
respondent's mother	118	46	72	0.64	2.92	1.40-6.16	0.002←
respondent's father	24	10	14	0.71	3.27	1.08-9.94	0.017←
respondent's brother	59	20	39	0.51	2.34	0.99-5.58	0.032←
not one single person	261	72	189	0.38	1.74	0.88-3.48	0.086
other relatives	24	12	12	1.00	4.57	1.53-13.84	0.002←
respondent herself	20	6	14	0.43	1.96	0.55-6.79	0.230

¹²¹ Odds = number of dead children / number of alive children.

¹²² OR = odds ratio.

¹²³ 95 percent confidence interval for the OR.

¹²⁴ p-value, significance by Chi-Square test, significant at p<0.05 (flagged with ←).

The sheer numbers reveal that respondents most often considered *mjomba* (36/164 mothers, 22%), the respondent's brother (33/164 mothers, 20%) or the respondent's husband (26/164 mothers, 16%) the most important decision-maker in child health related issues. Out of them, the odds of childhood mortality were the lowest with respondents who reported the husband or *mjomba* to be the most important decision-maker. However, these findings were not statistically significant. Statistically significant negative association with higher odds for mortality as compared to *mjomba* as decision maker was reached when the respondent reported that she herself was the the one to make decisions. A similar association was related to respondent's father (and some other relatives that were mentioned infrequently) as being in position to make child health related decisions.

Also a variable that summarizes answers to several questions about decision-making shows the important position of *mjomba*¹²⁵. In comparison to *mjomba*, there is a statistically significant association between several other family members (brother of the respondent, her husband, her mother and her father) and higher childhood mortality.

Similarly, as table 58 below indicates, if the respondent said that she would seek the consent of *mjomba* in cases of uncertainty there was a statistically significant association with lower childhood mortality. A comparable relationship was found with a question about relatives with whom the respondent agreed about her child's treatment that took place outside the home. The data of the latter consultation variable indicates that the odds of childhood mortality were statistically significantly lower if respondent's mother was in a position to decide about treatment outside home.

¹²⁵ The person whom I considered to be the dominant one in decision-making was determined by the respondents answers to eight relevant question during the survey interview (3.7., 3.8., 3.9., 4.3, 4.4., 4.5., 4.7., 5.6.) I basically counted which relative was mentioned most frequently. In most of the cases it was not a problem to detect the dominant decision maker because many respondents made the choice clear on very good grounds. Typical answers were, for instance, "my husband, because he lives in South Africa and has money", or "my brother, because he is the richest", or "mjomba, because he is the owner of the family".

Table 58. Bivariate associations between decision-making and childhood mortality.

Decision-making variable	total	deaths	alive	odds	OR	CI	p
If respondent is uncertain about treatment whose consent she seeks? ●●● ¹²⁶							
respondent's uncle (<i>mjomba</i>) yes	100	19	81	0.23	ref		
respondent's uncle (<i>mjomba</i>) no	717	246	471	0.52	2.23	1.29-3.89	0.002←
respondent's husband yes	238	88	150	0.59	ref		
respondent's husband no	579	177	402	0.44	0.75	0.54-1.04	0.076
respondent's mother yes	234	83	151	0.55	ref		
respondent's mother no	583	182	401	0.45	0.83	0.59-1.15	0.240
respondent's brother yes	124	40	84	0.48	ref		
respondent's brother no	693	225	468	0.48	1.01	0.66-1.55	0.963
remaining relatives yes	129	38	91	0.42	ref		
remaining relatives no	688	227	461	0.49	1.18	0.77-1.88	0.431
With whom does the respondent agree if child needs treatment at health center or at local healer? ●●●							
respondent's uncle (<i>mjomba</i>) yes	81	16	65	0.25	ref		
respondent's uncle (<i>mjomba</i>) no	736	249	487	0.51	2.08	1.14-3.82	0.010←
respondent's husband yes	435	152	283	0.54	ref		
respondent's husband no	382	113	269	0.42	0.78	0.58-1.06	0.102
respondent's mother yes	197	55	142	0.39	ref		
respondent's mother no	620	120	500	0.24	0.62	0.42-0.91	0.011←
respondent's brother yes	140	46	94	0.49	ref		
respondent's brother no	677	219	458	0.48	0.98	0.65-1.47	0.907
other relatives yes	115	37	78	0.47	ref		
other relatives no	702	228	474	0.48	1.01	0.65-1.58	0.948
agrees with no-one yes	31	11	20	0.55	ref		
agrees with someone no	786	254	532	0.48	0.87	0.39-1.96	0.712

Consultation

Table 59 below presents variables related to consultation. Most of the respondents (94/164 mothers, 57%) said that they would start the treatment of an ailing child by themselves. Here again, the respondents who reported to consult their mothers or *mjomba* had the lowest odds for childhood mortality. If, however, the respondent did not consult anyone, the odds of childhood mortality increased amongst her children. If the respondent gave a vague answer without being able to indicate a person whom she would consult, the odds for childhood mortality were the highest. These findings also reached a statistically significant association as compared to the rest of the relatives.

The association of an important role of *mjomba* with lower childhood mortality is further confirmed with questions about people whom are asked for advice, the advisor in the cases when first treatment fails, and in serious illness cases.

¹²⁶ ●●● = respondent mentioned several relatives in her answer. In analysis, each relative is weighed against all others.

Table 59. Bivariate associations between consultation and childhood mortality.

Consultation	total	deaths	alive	odds	OR	CI	p
Does the respondent treat with medicine she knows or does she consult someone?							
she consults her uncle (<i>mjomba</i>)	35	6	29	0.21	ref		
she consults her husband	84	31	53	0.58	2.83	0.97-8.57	0.034←
she consults her mother	57	8	49	0.16	0.79	0.22-2.89	0.687
she consults other relatives	76	24	52	0.46	2.23	0.75-6.91	0.112
a vague answer	71	33	38	0.87	4.20	1.43-12.91	0.003←
she does not consult anyone	494	163	331	0.49	2.38	0.92-6.52	0.052←
Whom does the respondent ask for advice if an ill child needs treatment? ●●●							
respondent's uncle (<i>mjomba</i>) yes	90	17	73	0.23	ref		
respondent's uncle (<i>mjomba</i>) no	727	248	479	0.52	2.22	1.25-4.01	0.004←
respondent's husband yes	267	87	180	0.48	ref		
respondent's husband no	550	178	327	0.48	0.99	0.72-1.37	0.949
respondent's mother yes	208	68	140	0.49	ref		
respondent's mother no	609	197	412	0.48	0.98	0.69-1.40	0.927
respondent's brother yes	103	36	67	0.54	ref		
respondent's brother no	714	229	485	0.47	0.88	0.56-1.39	0.560
other relatives yes	182	69	113	0.61	ref		
other relatives no	635	196	439	0.45	0.73	0.51-1.05	0.073←
she asks no-one	48	17	31	0.55	ref		
she asks someone	769	248	521	0.48	0.87	0.45-1.67	0.649
If first treatment trial is not successful, whom does the respondent asks for advice? ●●●							
respondent's uncle (<i>mjomba</i>) yes	105	19	86	0.22	ref		
respondent's uncle (<i>mjomba</i>) no	712	246	466	0.53	2.39	1.38-4.16	0.001←
respondent's husband yes	267	84	183	0.46	ref		
respondent's husband no	550	181	369	0.49	1.07	0.77-1.48	0.678
respondent's mother yes	217	75	142	0.53	ref		
respondent's mother no	600	190	410	0.46	0.88	0.62-1.24	0.435
respondent's brother yes	91	31	60	0.52	ref		
respondent's brother no	726	234	492	0.48	0.92	0.57-1.50	0.725
other relatives yes	170	62	108	0.57	ref		
other relatives no	647	203	444	0.46	0.80	0.55-1.15	0.207
she asks no-one	48	17	31	0.55	ref		
she asks someone	521	248	273	0.48	0.87	0.45-1.67	0.649
If her child is seriously ill, does respondent inform? ●●●							
respondent's uncle (<i>mjomba</i>) yes	105	20	85	0.24	ref		
respondent's uncle (<i>mjomba</i>) no	712	245	467	0.52	2.23	1.30-3.84	0.002←
respondent's husband yes	267	85	182	0.47	ref		
respondent's husband no	550	180	370	0.49	1.04	0.75-1.44	0.798
respondent's brother yes	109	36	73	0.49	ref		
respondent's brother no	708	229	479	0.48	0.97	0.62-1.52	0.887
respondent's mother yes	17	2	15	0.13	ref		
respondent's mother no	800	263	537	0.49	3.67	0.80-23.42	0.066
other relatives yes	68	28	40	0.70	ref		
other relatives no	794	237	512	0.42	0.666	0.39-1.13	0.108
respondent informs no-one	55	19	36	0.53	ref		
respondent informs someone	762	246	516	0.48	0.90	0.40-1.67	0.729

I also counted the number of different people respondent consults for treatment. The assumption was that the more people were involved in the process, the longer time it would take and so the outcome would be adverse. The data, however, does not support this hypothesis (data not shown).

Financial aspects

Table 60 below shows associations related to childhood mortality and financial matters. Key people appear to be the mother of the respondent, the husband of the respondent, the father of the child and *mjomba*. Interestingly, all respondents named only one family member as the provider of money. There are only two statistically significant associations included in this table. Firstly, the table reveals that if the respondent's *mjomba* took care of payment the odds of childhood death were the second highest as compared to other family members. The highest odds for childhood mortality were amongst children whose father (who often was not the same person as the present husband) was responsible for payment. The respondent's husband was the primary source of money most often (102/164 mothers, 62%). If it was the respondent's mother who took care of payment, the odds for childhood mortality was the lowest. However, it was only 7 respondents who stated that this was the case and the finding is not statistically significant.

Table 60. Bivariate associations between financial issues and childhood mortality.

Financial expenses	total	deaths	alive	odds	OR	CI	p
Who takes care of payment if money is needed for treatment of a child's illness?							
respondent's uncle (<i>mjomba</i>)	44	20	24	0.83	ref		
respondent's husband	474	138	336	0.41	0.49	0.25-0.96	0.024←
respondent's mother	43	11	32	0.34	0.41	0.15-1.12	0.053
respondent's father	30	13	17	0.76	0.92	0.32-2.59	0.860
respondent's brother	89	28	61	0.46	0.55	0.24-1.24	0.114
father of the child	29	14	15	0.93	1.12	0.39-3.19	0.813
rest of the relatives	15	5	10	0.50	0.60	0.15-2.35	0.412
respondent herself	93	36	57	0.63	0.76	0.34-1.67	0.453
Has the respondent ever borrowed money for treatment of an ailing child?							
she has borrowed money	259	68	191	0.36	ref		
she has not borrowed	558	197	361	0.55	1.53	1.09-2.15	0.010←

13.3.2 Treatment of childhood illnesses

Chapter 3.3 described therapeutic options and the pluralistic health-seeking environment utilizing the terms coined by Arthur Kleinman. He identified three overlapping and interconnecting health care sectors: popular sector, folk sector and professional sector. For the analysis, I categorized the survey responses of the mothers concerning treatment process into three groups accordingly: home treatment, treatment at a local healer and treatment at the health center. Medications that mothers named were categorized as modern or as local pharmacopeia. Additionally, modern medications were classified into (biomedically) efficient or inefficient.

As I explained in the sections describing the study design, during the interviews respondents were asked two types of questions about the treatment of childhood illness episodes. General questions aimed to query attitudes. Illness-specific questions were about illnesses respondents themselves raised as the most problematic. According to the study design, these responses reflect respondent's preferences of illnesses management and her knowledge about effective treatment options.

General questions

Table 61 presents bivariate associations between respondents' accounts of treatment of childhood illnesses and childhood mortality. There were two survey questions aimed to examine into this theme: one about medications and the other one about mothers' response. The most common answer to a general question about a medication that mothers preferred to use for childhood illnesses was to treat the child with a certain kind of pill (63/164 mothers, 38%). This was also the group of respondents who registered the lowest odds for childhood mortality. Odds for childhood mortality among children of such respondents who said that the first medication was given only at the hospital or who mixed both local and modern medications was statistically significantly higher. The utilization of local medicines or just generally stating "pills" lead to higher odds of childhood mortality, but there was no statistically significant association.

The question about first response to childhood illnesses brought fourth similar kinds of associations. Most mother stated that they would first go to health center (85/164, 52%) or to give pills (49/164, 30%). Fewer mothes would first got to a local healer (9/164, 5%) or to give both local and modern medicines (6/164, 4%). These latter options were however associated with the odds for higher childhood mortality. Interestingly, the lowest odds were amongst children of such families where mother stated that she would immediately when the child fell ill administer local medications.

Table 61. Bivariate associations between treatment of illnesses and childhood mortality.

First treatment modality	total	deaths	alive	odds	OR	CI	p
Type of first medication respondent uses for an ill child (a general question)							
specified kind of modern medication	305	87	218	0.40	ref		
gives unspecified modern medicines (pills)	202	65	137	0.47	1.19	0.79-1.78	0.379
medicine at hospital	104	41	63	0.65	1.63	1.00-2.66	0.038←
local medicine	164	53	111	0.48	1.20	0.78-1.84	0.393
both modern and local medicine	42	19	23	0.83	2.07	1.02-4.19	0.027←
Respondents first response when her child falls ill (a general question)							
gives local medicines	58	12	46	0.26	ref		
goes to health center	402	126	276	0.46	1.75	0.86-3.62	0.097
gives modern medicines (pills)	256	84	172	0.49	1.87	0.90-3.95	0.070
goes to a local healer	44	17	27	0.63	2.41	0.92-6.39	0.046←
gives both local and modern medicines	57	26	31	0.84	3.22	1.31-7.95	0.007←

Illness specific questions

Findings about the treatment of specified illnesses, those that the respondent herself said to be the most common amongst children, allow the examination of the role of different treatment preferences in relation to childhood mortality. The data indicates that even though there is no information of actual treatment practices, there is a statistically significant association between certain lines of preferences and childhood mortality. It is obvious from the table 62 below that modern and efficient medications and lower childhood mortality go together. With traditional treatment the trend is the opposite.

The preferred type of second treatment appeared to be less crucial than the preferred first treatment. It gained statistical significance with fewer variables but the association was towards the expected direction.

Table 63 shows that out of the individual illnesses that I examined only the first response to diarrhea proved to be statistically significant. If respondents stated that they preferred to use standard biomedical treatment (usually ORS) for childhood diarrhea, the odds of childhood deaths among her children were the lowest. This was also the most typical answer (60/164 mothers, 37%). The odds of childhood mortality were the highest amongst respondents who reported to prefer local treatment for diarrhea. This finding bears a statistically significant association.

Interestingly, the odds of childhood mortality were the lowest amongst mothers who considered local preparations only as the second treatment option for malaria. I interpret this to indicate that they preferred modern medications as the first treatment option.

Table 62. Bivariate associations between treatment practices of illnesses that mothers reported to be the most common and childhood mortality.

Treatment modality	total	deaths	alive	odds	OR	CI	p
First treatment preference							
all were modern	239	58	181	0.32	ref		
all were local	81	36	45	0.80	2.50	1.42-4.38	0.000←
vary	497	171	326	0.47	1.64	1.14-2.36	0.005←
All first treatment preferences were							
biomedically efficient	70	14	56	0.25	ref		
some were not biomedically efficient	747	251	496	0.51	2.02	1.07-3.89	0.020←
Number of local treatment options as the first treatment preference							
0	258	63	195	0.32	ref		
1	267	91	176	0.52	1.60	1.07-2.38	0.015←
2	127	55	72	0.76	2.36	1.47-3.81	0.000←
3 or more	165	56	109	0.51	1.59	1.01-2.50	0.034←
Number of biomedically efficient choices as the first treatment preference							
3 or more	243	60	183	0.33	ref		
2	227	74	153	0.48	1.48	0.97-2.25	0.058
1	174	62	112	0.55	1.69	1.08-2.64	0.015←
0	173	69	104	0.66	2.02	1.30-3.15	0.001←
Second treatment preference							
all were modern	240	100	140	0.71	ref		
are were local	23	5	18	0.28	0.39	0.12-1.16	0.062
vary	500	145	355	0.41	0.57	0.41-0.80	0.001←
no second treatment	54	15	39	0.38	0.54	0.27-1.07	0.059
All second treatment preferences							
were biomedically efficient	182	77	105	0.73	ref		
were not biomedically efficient	635	188	447	0.42	0.57	0.40-0.82	0.001←

Table 63. Preferred treatment of selected childhood illnesses.

Treatment modality	total	deaths	alive	odds	OR	CI	p
Preferred first treatment for diarrhea was							
standard biomedical treatment	278	68	210	0.32	ref		
modern but inefficient treatment	86	27	59	0.46	1.41	0.80-2.48	0.201
local treatment	221	90	131	0.69	2.12	1.42-3.17	0.000←
respondent did not mention diarrhea ¹²⁷	232	80	152	0.53	1.63	1.09-2.43	0.013←
Preferred second treatment for malaria was							
standard biomedical treatment	190	68	122	0.56	ref		
modern but inefficient treatment	14	5	9	0.56	1.00	0.28-3.43	0.995
local treatment	26	4	22	0.18	0.33	0.09-1.06	0.038←
no treatment	83	23	60	0.38	0.69	0.38-1.25	0.193
respondent did not mention malaria ¹²⁸	504	165	339	0.49	0.87	0.61-1.26	0.448

¹²⁷ Out of 165 mothers whose survey answers are included in the analysis, 47 did not include diarrhea amongst the common childhood health problems.

¹²⁸ Out of 165 mothers whose survey answers are included in the analysis, 106 did not include malaria amongst the common childhood health problems.

Finally, worth mentioning is that there was no association between respondents responses over causation and prevention of illnesses and childhood mortality.

13.3.3 Contextual variables

Communities provide a localized context for child survival by providing cultural, social and economic structures that are important in the interplay of determinants in child well being. Children are the weak link in society and their health condition is very sensitive to the way of life in the surrounding environment. (Andes 1989) This is why, in addition to health seeking variables, I included information about selected contextual variables in the present material. Also, the integrated approaches to child health that I discussed in chapter 3.1.3 included some contextual factors in the model of analysis.

By including contextual variables in the analysis I wanted to compare the level of OR:s that were achieved with health seeking variables and contextual variables. Additionally, by utilizing the term *context* I want to emphasize the crucial role of this data not only as background factors. Contextual variables are grouped under three themes:

- family characteristics,
- economic status of various family members, and
- educational status of family members.

Family characteristics

Based on previous research, I anticipated that family characteristics might generally explain the distribution of childhood death incidences. Several authors have discussed the well-being of children in relation to family structure. The family is the interface between a child and the surrounding society. It is known almost universally that mothers are the main caretakers of the children (Amuyunzu 1998). Apart from the central position of the mother and, in some cases other female members of the lineage, family structure may be very divergent. In most parts of Africa, the nuclear family is not a relevant unit for analysis. This is why the present research was expanded to the role of the extended family. Variables that were analyzed cover personal attributes of the respondent, husband, uncle and possible other heads of the family.

As I explained earlier, women in Lungwena typically started having children very young and kept reproducing throughout their fertile age. As expected, respondents' age,

total number of children and number of children who have died formed a demographic entity. Young women tended to have fewer children and they also had lost fewer children in absolute (and also in relative) terms. The opposite applies to older women: because child mortality is so common, the older the mothers get, the more children they have usually lost. As table 64 below shows, in bivariate analysis the mother's age and number of children carried a statistically significant association with childhood mortality. Closely linked to the demographic variables discussed above is the birth order of children. In this material, birth order from 2 to 5 was associated with the lowest odds of childhood mortality in a statistically significant manner as compared to lower or higher birth order.

Additionally, if all of the children lived together with their mother, there was statistically significantly less childhood mortality as compared to families where some of the children were away. The mother's place of residence also had an effect on childhood mortality so that in two out of the six villages that were covered during the interviews, the odds of childhood mortality were significantly higher than in the village with the lowest childhood mortality. Yet, it did not make any difference to childhood mortality where husbands, uncles and possible other heads of the families lived.

Table 64. Bivariate associations between family characteristics and childhood mortality.

Family characteristics	total	deaths	alive	odds	OR	CI	p
Age of respondent							
under 30 yrs	177	49	128	0.38	1.44	0.89-2.34	0.118
30 - 39 yrs	224	47	177	0.27	ref		
40 - 49 yrs	141	109	32	3.41	12.83	7.49-22.08	0.000←
50 yrs and over	166	60	106	0.57	2.13	1.32-3.43	0.001←
Total number of children							
1 - 4	213	41	172	0.24	ref		
5 - 7	328	96	232	0.41	1.74	1.12-2.69	0.009←
8 - 13	276	128	148	0.86	3.63	2.35-5.62	0.000←
Birth order of children							
first	164	60	104	0.58	1.58	1.06-2.34	0.018←
2 through 5	474	127	347	0.37	ref		
6 through 13	179	78	101	0.77	2.11	1.45-3.07	0.000←
Where do children live?							
all children live with mother	533	157	376	0.42	ref		
some children are away	280	104	72	1.44	3.46	2.39-5.00	0.000←
Respondent lives in the village of							
Ntumbula	55	12	43	0.28	ref		
Mwanjati	68	28	40	0.70	2.51	1.05-6.06	0.023←
Kwilasya	16	8	8	1.00	3.58	0.96-13.60	0.027←

Another finding worth paying attention to is that contraception showed a statistically significant association with childhood mortality (see table 65 below). If the respondent reported that she was using contraception, the analysis revealed that the odds of childhood mortality were lower as compared to the rest of the respondents. There was no discrimination here between different methods of contraception, modern or traditional. Even the fact that respondent said that she would like to have contraceptives was associated with lower childhood mortality as compared to those who did not intend to acquire contraception.

I also examined the marital history of both the respondent and her husband in detail. Variables that reached statistical significance are shown in table 66 below. Only the high number of respondent's husbands was statistically significantly associated with childhood mortality so that higher child mortality and a high number of husbands were linked. The number of wives the husband had either before or after the respondent or the total number of his wives did not cast any effect on childhood mortality. Also, the marital status of the respondent did not show any statistically significant effects. Only the fact that the respondent's marriage was monogamous was marginally related to childhood mortality but did not reach statistical significance (OR 1.12, $p = 0.059$ for polygamous marriages, data not shown in the table).

Table 66 also includes information on the association between the head of the family and childhood mortality. The presence of the respondents mother, her brother and some other selected family members was associated with high childhood mortality as compared to the situation where *mjomba* was there. Additionally, if the head of the extended family was an inappropriate¹²⁹ person according to the local cultural rule, there was a significant association with higher odds of childhood mortality as compared to the rest of the families.

¹²⁹ The head of the family was the respondent, her mother or grandmother of her children (instead of uncle husband, father, grandfather, respondent's brother).

Table 65. Bivariate associations between contraception and childhood mortality.

	total	deaths	alive	odds	OR	CI	p
Contraception variable							
respondent was using contraception ¹³⁰	199	48	151	0.32	ref		
she was not using contraception	609	213	396	0.54	1.69	1.16-2.48	0.004←
Desire for contraception ¹³¹ .							
she would like to use a method	312	97	215	0.45	ref		
she would not like to use a method	289	112	177	0.63	1.40	0.99-1.99	0.049←
she was using contraception	199	48	151	0.32	0.70	0.46-1.08	0.088

Table 66. Bivariate associations between family characteristics and childhood mortality.

Family characteristics	total	deaths	alive	odds	OR	CI	p
Number of husbands respondent has had (before the present one)							
0	210	59	151	0.39	ref		
1 to 2	317	94	223	0.42	1.08	0.72-1.62	0.700
3 to 5	122	48	74	0.69	1.66	1.01-2.73	0.034←
respondent was not married	168	64	104	0.61	1.57	1.00-2.40	0.039←
Head of the extended family was							
respondent's uncle (<i>mjomba</i>)	344	96	248	0.39	ref		
respondent's husband	21	5	16	0.31	0.81	0.25-2.43	0.684
respondent's mother	27	16	11	1.46	3.76	1.58-9.03	0.001←
respondent's father	29	13	16	0.81	2.10	0.91-4.81	0.054
respondent's eldest brother	217	78	139	0.56	1.45	0.99-2.12	0.045←
respondent's brother (not eldest)	101	31	70	0.44	1.14	0.68-1.91	0.585
other relatives	44	16	21	0.76	2.30	1.06-4.95	0.020←
respondent herself	15	5	10	0.50	1.29	0.37-4.25	0.647
Head of the extended family was an appropriate male ¹³²							
yes	731	228	503	0.45	ref		
no	86	37	49	0.75	1.67	1.03-2.69	0.027←

Economic status of family members

Based on key informant's advice I knew that the use of cash income would not be a valid indicator of resources in this rural population. Thus, the variables were chosen to reflect the living conditions of families. Possession of resources was used as a proxy for economic status and social class (see Fosu 1994). During the interviews, family member's ownership

¹³⁰ All methods are included in this category (local and modern).

¹³¹ Women without any method were asked this question.

¹³² The head of the family is the respondent's uncle, her husband, her father, her grandfather or her brother (instead of respondent, her mother or her grandmother).

of certain items that were purchased with money or have cash value was inquired about. The value of different possessions was first discussed in Focus Groups with the mothers. I also talked with other local people on informal occasions. Thus I got to know that for example, a cow equaled roughly about ten goats and so forth. I analyzed the association between these possessions and child survival separately, I also constructed an economic index for the individuals.¹³³ Certain amenities the respondent had in her disposal were also listed during the interviews.

To my surprise, there was no association between childhood survival and the economic index counted for the respondents. Also, ownership of different items and amenities and the type of house where the respondent lived predicted poorly on childhood mortality. Out of the specific possessions that women reported, only the ownership of a rubbish pit had a statistically significant association with lower childhood mortality (OR 0.71, $p = 0.026$, data not shown in the table). Like decision making findings above, this is more likely to reveal the general resources of a mother rather than her economic status. In Lungwena, digging a the rubbish pit was men's responsibility. If there were no capable men in the family there probably was no rubbish pit.

The data also includes detailed information on the economic proxies of the respondent's husband, uncle, and head of the family, if it was another person than uncle. Here too, there were no associations with the economic index and the odds of childhood mortality. Out of these variables, the only ones that were statistically significantly associated with odds of low childhood mortality are some of the highly selected possessions of the *mjomba* (boat, cows and some other items that the respondent reported).

Very interestingly, if the respondent considered her mother, her sister or her children as the richest family members, there was a statistically significant association with lower odds of childhood mortality amongst the children. Similarly, if the respondent considered herself as the provider of economic needs for the family there appears to be an association with childhood mortality. This finding does not quite reach statistical significance but is well in line with the previous variable (OR 1.38, $p = 0.065$ over all the rest family members, not shown in the table).

¹³³ The "value" of these assets in the economic index is based on the locally set values. Ownership of domestic animals (chicken, goats, cows) added 1-6 points depending on the kind and number of animals, radios (7 points) and bicycles (8 points) were highly wanted and indicated that there was cash money available. Other valuable items that the respondent reported added up by 3 points. Respondent's total score varied from 0 to 24. Each of the amenities (pit latrine, blanket, bath house, dish rack, rubbish pit, mattress) was counted as one point. The total score gained by the respondents varied from 0 to 6.

Educational status of family members

It was previously known that the level of women's formal education in Lungwena was very low (Lungwena DHS 1994). However, there have been literacy schools operating in the area. That is why, besides the years completed at school, the interviewees were also asked if they were able to read and write. The examples that were given were a short letter and a newspaper. Similar kinds of data was also collected about the respondent's husband, uncle and other possible heads of the family even though more men than women had attended school.

The ability of educational factors to predict childhood survival was even poorer than economic proxies. All of the educational factors remained well below statistical significance.

13.4 Multivariate analysis: strength of associations

The above analysis of association revealed a crude bivariate childhood mortality profile in Lungwena. Additionally, I made an attempt to identify the factors that would show an independent association with childhood mortality. For this purpose, multivariate analysis was employed.

The main question that the analysis addressed was whether there were variables that were independently associated with childhood mortality in the three sub-categories that were discussed above (social network measures, treatment of childhood illnesses and contextual variables).

Analysis technique

Because the number of variables that remained statistically significant in bivariate analysis was rather high, I built the multivariate model stepwise. First, I tested the relative strength of the variables within the three sub-groups that were used in bivariate analysis. For this purpose I dichotomized the variables. Then, I utilized logistic regression with backward and forward stepwise model construction. In all cases, the variables that were selected as having an independent association with childhood mortality were the same with both methods. These variables are described in table 67 below.

For the final model I selected suitable variables based on various criteria. From the contextual variables both the mother's age and total number of children were included. Within the social network measures subgroup there were three variables selected as having

independent association with childhood mortality. I excluded the one depicting the person who is asked for advice because it was used as one factor while constructing the variable of the dominant decision maker. Therefore only the latter was included. Additionally, the variable depicting the borrowing of money was included because it is not collinear with other social network measures. Amongst the two treatment variables that were left as statistically significant within this sub-group in the initial analysis, I selected the variable depicting the treatment of diarrhea for the final model because of its smaller p-value.

Table 67. Description of variables that were selected as independent factors associated with childhood mortality in every sub-group of analysis.

Independent variables	Description of the variable	n	%
<i>1) Social network measures</i>			
Dominant decision maker ●●● ¹³⁴	uncle is the dominant decision maker	78	9
	uncle is not the dominant decision maker	739	91
If first treatment trial is not successful,	the respondent asks uncle for advice	105	13
	does not ask uncle for advice	712	87
Borrowing money for treatment of an ailing child	mother has borrowed money	259	33
	mother has not borrowed money	558	68
<i>2) Treatment of childhood illnesses</i>			
Preferred first treatment for diarrhea was ●●●	an efficient modern method	278	34
	is not efficient modern method	539	66
Number of local options as first preference	0 local treatment options	258	32
	1 or more local treatment options	559	68
<i>3) Contextual variables</i>			
Total number of children ●●●	number of children for one mother	linear	variable
Mother's age ●●●	15-29 years	177	22
	30-39 years	224	27
	40 years and over	416	51

Findings

The findings of the logistic regression analysis are collected in table 68 below. It is obvious that all the sectors of child health-seeking that have been analyzed carry an independent association with childhood mortality. The picture remains essentially the same even if in the model, one of the variables was substituted with another from the same sub-group. Only the p-value varied; but there was not much difference in the adjusted odds ratio.

¹³⁴ Variables flagged with ●●● are included in the final logistic regression model.

Table 68. Logistic regression of childhood mortality for individual effects of contextual variables and variables describing social networking variables in the treatment of childhood illnesses.

Variables in the model	p-value	AOR	CI
Total number of children (linear)	0.001	1.12	1.05–1.19
Mother's age		ref	---
15–29 years	0.012		
30–39 years	0.36	0.59	0.37–9.66
40 years and over	0.737	1.08	0.68–1.73
Dominant decision maker	0.038	1.92	1.03–3.53
Treatment of diarrhea	0.014	1.53	1.09–2.14

13.5 Discussion and conclusions

The baseline finding related to childhood mortality is that childhood death is such a common phenomenon that a great majority of the mothers in Lungwena have experienced it. Research on determinants of child mortality in general and health-seeking studies in particular, have suggested a large variety of socio-economic and behavioral factors that may be associated with child survival. Socio-economic factors that have been typically examined in relation to child survival outcomes in developing countries include family structure, parental education (especially that of the mother) and household economic conditions. Increasing concern has been put upon the environment where the child lives (water, toilet facility, electricity). Thus far the findings are inconclusive and, in some cases, even contradictory.

The aim of this chapter was to examine the association between health-seeking variables in Lungwena and childhood mortality. Moreover, selected contextual factors were included in the analysis. Environmental factors are lacking in the Lungwena data because infrastructure there was very limited: there was no electricity, no piped water (water sources tend to vary according to the season), and latrines were of varied conditions.

Decision-making and consultation

Entirely contrary to the original hypothesis around which the fieldwork was based, the presence of a maternal uncle in the health-seeking process was associated with lower childhood mortality. This association was found with regards to actual decision making variables and with data about consultation. One possibility of interpreting the finding is that

members of the extended family formed a resource base for the mother. If there was an uncle in the family it was a sign of sustainable family structure. Customarily, the uncle has many rights over the extended family but correspondingly, he also has heavy responsibilities. As discussed earlier, in the local language he is called the owner of the clan, *asyene mbumba*. An exception to the rule is formed by the finding that *mjomba* as a source of money was negatively associated with childhood mortality.

Rather unexpectedly, if a respondent had borrowed money to treat her children, survival chances in the family were improved. In previous literature findings like this have been examined in relation to women's ability to effectively mobilize different support systems, which depends on their different social position. If someone is really poor, she is not even able to borrow money. (Castle 1993, Adams et al. 2002, Hampshire 2002) Uncles do not seem to provide financial resources.

Treatment process

Both the general and illness specific questions about the treatment of childhood illnesses convey two messages. Firstly, several variables describing the type of the first treatment gained a statistically significant association with childhood mortality so that effective biomedical treatment protected children. The analysis of the second treatment brought forth considerably fewer statistically significant relationships with childhood mortality. Thus, the promptness of the treatment appears crucial. In accordance with this is the negative association with childhood mortality and the respondent reporting that there was no second treatment at all. Secondly, the effects of preferred types of medications are in the expected direction. The higher the amount of modern medicine preferred and reported to be utilized, the higher child survival. If, in general questions, the respondent gave a name for the medication, usually a name for specific pills she preferred to use, her children were protected more than the children of mothers who just responded *mapilisi*, any kind of pills or traditional medicine. This was also the case if modern and traditional alternatives were mixed.

The evidence also shows that the availability of health services is a weak predictor of child mortality levels. Because Lungwena health center was built only at the beginning of 1990s and was staffed in 1993, the provision of recent medical services could not have affected the survival prospects of children born a long time ago. This is why the distance to the health center cannot be used as a variable in the present study.

Family structure

People living in the same limited geographical area tend to have similar life patterns. Chapter 7.3 described family structure in Lungwena. It is known that almost all women in Malawi marry and start having children very young and keep reproducing until menopause. In this high childhood mortality context, the mother's age and total number of children correlate strongly. Together with the age and total number of births, the number of children that a woman has lost forms a triangular relationship that depicts the structure of childhood mortality in Lungwena. Health seeking factors only add up on this basis.

The birth order of children in Lungwena acts in accordance with previous findings in other demographically similar locations in Malawi (Manda 1999) and elsewhere (for references, see Yassin 2000). First and higher orders of births form a J-shaped or U-shaped association of birth order and childhood mortality in the present material and as reported in several locations elsewhere.

As far as the role of the husband is concerned, distinctive of the situation in Lungwena appears to be a lack of association. This is not an unexpected finding knowing that marriage as such does not have strong status there. As I discussed in an earlier chapter, it is often stated in the literature that polygamy does not allow the fathers to take care of their children properly. In Lungwena it was also socially acceptable for the husband to take a minor role as a family supporter and decision maker. Only if the respondent had had many (3 to 7) husbands, childhood mortality was higher amongst her children as compared to women with fewer husbands. This could be explained, for instance, by sexually transmitted diseases whose prevalence would gradually increase in relation to the number of spouses.

I also intended to analyze the effects of the place of husband's residence. During the interview respondents were asked where the husbands lived but this proved not to be a valid question in polygamist unions. The majority of the respondents reported that their husband lived with them but, with further questioning, they stated that the husbands shared their time between co-wives. Thus, the lack of association with the husband's residence and childhood mortality is understandable. Yet, there was an association with lower childhood mortality and respondents in monogamous marriages. Similar findings have been reported from Mali (Strassmann 1997).

Knowing that modern contraception in Lungwena was very rare,¹³⁵ it is interesting that the utilization of contraception was associated with lower childhood mortality. The same effect was true with the very idea of wanting contraception. This phenomenon might simply reveal women's determination to decide child spacing and matters concerning their health.

Economy

Material poverty is a significant feature of Malawian life. Despite this, the economic conditions of the respondents varied a lot when measured by the ownership of selected items. I expected the variation to be reflected in childhood mortality. However, there was practically no association between childhood mortality and the economic status of the mothers or other family members. This finding is especially interesting in the light of the notion that, for example, the ownership of radios and bicycles were locally regarded as signs of relative wealth.

In Lungwena, like in other matrilineal societies (Caldwell 1993), men and women typically have separate responsibilities and separate budgets. Knowing this, it was not surprising that there was no correlation between the husband's economic status and childhood mortality. Rather unanticipated, however, was that the uncle's economic status did not effect childhood mortality. It seems that the role of the uncle is exerted only through decision-making variables.

It has been shown earlier that national level aggregate data on economy is a rather weak predictor for child survival. For example Feachem et al. (1991) have demonstrated that there is a significant inverse relationship between the mortality risk of children under five and GNP per capita. Yet, the authors stress that it is still only 27% of variance between Sub-Saharan African countries that is explained by GNP. In other words, variables other than economy explain the majority of the variance better. Chapter 2.2. listed as an example countries in which the child mortality level is higher or lower than their GNP would imply.

Household level income has generally not proven to be any better as a predictor of child mortality than GNP. Tabutin and Akoto (1992) compared the association of household income and child mortality in several Sub-Saharan African countries. They

¹³⁵ Ashorn P, Chibaya AD, Mnjemu HC, Salin K and Salin ML (1994): Lungwena training health center project: annual report of activities. An unpublished report.

found that only a very high standard of living had a clear effect on child mortality rate. Velema et al. (1991) working in Benin found a slightly higher risk of child mortality for households with low socio-economic status. Mturi and Curtis (1995) report a remarkable lack of infant and child mortality by socio-economic groups in Tanzania. The situation in Lungwena might best be summarized by stating that, even if there is variation in people's economic condition, all of the people are poor.

Education

Educational levels are probably the most commonly used variable in the studies of child mortality in developing countries. Previous research has shown that, at both national and household levels, even after controlling for socio-economic variables and access to health services, maternal schooling is significantly associated with child survival. The processes through which the effect is mediated are not well understood. The meaning and importance of the mothers' education have been conceptualized in two major ways. There are those who regard education as a proxy for better economic status and living standards. Thus, educated people have better living conditions. Other researchers argue that education has an independent effect on child mortality. (Bicego and Boerma 1993, Joshi 1994, Adetunji 1995, Sandiford et al. 1995, see Hobcraft 1993 for a review of the literature) It has also been shown that biomedical health knowledge has a separate and positive effect on child mortality (Kovsted et al. 1999).

Similarly, the influence of the fathers' education, like that of the mothers', does not really make itself felt until after four years of primary school. Altogether, the fathers' education plays a lesser role than that of mother. (Tabutin and Akoto 1991)

In Lungwena, the lack of association between education and childhood mortality is easily explained. Firstly, most of the people living in the area, especially women, are illiterate. Many of those who read and write have only obtained skills in literacy schools. In those schools, the curricula did not include any additional subjects beyond reading and writing. Besides, the quality of formal education at Malawian schools is not very high due to a lack of materials, classrooms and qualified teachers (World Bank 1996). Thus, people who are literate have not necessarily been exposed to modern (biomedical) knowledge. And because of the agrarian occupation structure in the area, the effect of education is not likely be transmitted via income level or job type.

Conclusions: child health-seeking is inadequate to explain childhood mortality

The principal analytic question of this section was whether it is possible to determine the role of child health-seeking in childhood mortality using the present material. In conclusion, several variables that were analyzed reached a statistically significant bivariate association with childhood mortality. Multivariate analysis showed that the different sectors contributing to child health-seeking carried an independent effect.

On the basis of the present results one can state that decision-making, consultation and treatment practices partly explain childhood mortality in Lungwena. Several factors that I discussed under the contextual themes also appear as statistically significant. Most importantly these included family characteristics. On the contrary, economic and educational factors worked poorly. Based on these findings it is safe to say that the mothers knowledge and perceptions and preferences related to child health-seeking practices account inadequately for the high childhood mortality in the area. In sum, the analysis here is not of sufficient complexity to allow a comprehensive understanding of factors associated with childhood mortality. Nevertheless, it does provide information of the importance of health-seeking.

Unfortunately I could not address the question about the role of modern health-care with this material because during the field study the health center in Lungwena had a history of only a few years. Where the greatest success over mortality has been gained, this achievement has been the product of an interaction between certain cultural and social characteristics on the one hand, and the easy accessibility of basic modern health services on the other (Caldwell 1990).

PART 4: SUMMARY AND DISCUSSION

14 RECONSIDERING CHILD HEALTH-SEEKING

It has never been so bad! Maize is at Kwacha¹³⁶ 850,00, but only 10 kilos per head is allowed. Most maize is bought by rich people who sell to ordinary people at exorbitant price. The situation is pathetic as the value of the Kwacha continues to fall. Food shortage is at its peak.

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(She is a nurse supervising data collection for Lungwena Child Survival Study)*

The present research is basically concerned with advancing the understanding of factors having an effect on child health and child survival in Lungwena and, more broadly, in developing countries. The aim of the project was not to cover the entire field of child health in developing countries, but I chose to use child health-seeking as an approach to gain an insight into the field.

Despite the modest improvements, developing countries continue to struggle with persistently high rates of child mortality. While many reasons can be given for focusing on children, the most important is that they make up the most vulnerable age group in any society. Children are the weak link in a society and their health condition is very sensitive to the social, economic and physical environment. Therefore, the level of child mortality is widely used not only as a demographic measure but also as an important indicator of the level of welfare in a society (Rahman et al. 1993). It is also a summary measure of socio-economic development (DaVanzo et al. 1983), an indicator of life-style and value given to different generations, age groups and genders (Gursoy-Tezcan 1992) and as poverty's most sensitive barometer (Unicef 1996). Additionally, in biomedical argumentation, children have the highest rate of preventable deaths (Claeson and Waldman 2000).

An additional reason for focusing on child health-seeking was the recognition that lay care organized by the household is an important determinant of children's health status in developing countries.

¹³⁶ Kwacha is the currency unit of Malawi. 76,9 Kwacha equal one € (17.7.2002). Thus, the price of a 50 kg maize bag is about 11 €.

14.1 Summary: what did we learn about child health-seeking?

The text above was organized into three parts, each including several chapters. After the introductory chapter, there was a part situating child health-seeking, a part discussing previous literature and a part based on empirical material. Each of these parts ended with immediate conclusions. Therefore, there is no need for a detailed summary but the aim of this final chapter is to pull the threads together by highlighting the major themes emerging from the preceding chapters. The task includes both practical and theoretical considerations.

Re-examining the conceptual framework

The first part of the present report introduced a conceptual framework for the study by considering terms, problems and themes that are pivotal to an examination of child health-seeking. The role of the framework was to situate the two parts to follow. The conviction guiding the project was that any attempt to comprehend child health-seeking necessitates that behavior is viewed in a broader context. Additionally, there is no such thing as child health-seeking *per se*. Rather, child health-seeking is constructed in research and by research while selecting the constituents of an inquiry.

The framework was further divided into two chapters: the first one drafted a context and the second one an analytical frame. The starting point of the context was that an examination of child health-seeking contributes to discussion about child health and its determinants. Therefore, I first looked at children's health situation in developing countries in general and in Sub-Saharan Africa in particular by examining (in the absence of better indicators) child mortality figures. Additionally, I also briefly listed the variety of children's health problems. I also compiled this information for Malawi. The conclusion was that, in biomedical terms, children in developing countries and in Malawi suffer from ordinary diseases.

In Lungwena, however, child health appeared just as much an economic phenomenon as a medical matter. Manifestations of poverty were many. Also, accounts from key informants emphasized the lack of material resources. Along the same lines, literature on poverty and its repercussions points to the lack of resources as an important component of child survival. Therefore, in addition to the conventional demographic information, I also utilized economic data to provide a historical context for understanding how broad economic forces and institutions interact with micro-level health seeking circumstances.

Based on various documents I stated that macroeconomic trends have an obvious impact on child health in Malawi. I discussed malnutrition, health care delivery and education in detail.

Within part one, the second chapter introduced an analytical frame for the study. The aim of the frame was to avoid a situation where child health-seeking would be viewed as an isolated research topic without links to broader research traditions. The first line of discussion that I utilized for building the frame was based on the various disciplines that operate in the field of child health. The conclusion was that, in an analytical sense, child health-seeking cuts across disciplines and is situated in a space between the social sciences and medicine. The second analytical approach considered child health-seeking as a part of health behavior research. The lesson learned from this was that research concerning child health-seeking in developing countries has not benefited from research conducted in industrialized countries but is still focused on diseases and biomedical technology. The third analytical point of view took the research to a more concrete level. It was a selective discussion of tools that are helpful in analyzing literature and field material.

On a more general level, the closing argument of the first part is that context and analytical approach are especially important in defining the locus of the problem. While selecting the elements of the conceptual frame for a study on child health-seeking, the researcher necessarily takes a position in the discussions about prerequisites of child health. Discussions of international health policy have typically focused on the identification of interventions, which have the potential to reduce the burden of child health problems cheaply and effectively. In doing so, the focus is placed on the burden of diseases.

Main findings from previous literature

While reviewing previous literature on child health-seeking in developing countries the basic idea was to observe not only the empirical findings but also to make a note of the way the studies are set in a conceptual framework. For this purpose I utilized the tools that part one provided. I read the texts by paying attention to the aspects of child health-seeking that are included in study designs and aspects that are not. Fortunately, a literature search with pre-set selection criteria retrieved many relevant articles so that it was possible to identify certain general trends and tendencies.

One of the main findings based on the previous literature was that the prevailing theoretical model of child health-seeking studies is based on applied biomedicine. The body

of research is dominated by concern about poor child health in developing countries and a biomedical solution to the health problems. Other elements of context are seldom present.

Additionally, the body of literature is replete with empirical studies that seek to identify cognitive determinants of health-seeking practices. Discussion in literature has reduced child health-seeking to practical management of diseases. Disease episodes are typically approached as a matter of correctly utilizing Western health services and medications. Studies frequently point out the discrepancy that exists between the provision of biomedical health care and local beliefs and practices surrounding child health.

Furthermore, research on child health-seeking in developing countries differs markedly from its counterpart in developed countries, perhaps most importantly by the limited theoretical basis that has been adopted. When compared to the general discussion about health behavior, a significant omission from the literature on child health-seeking in developing countries is a consideration of the prerequisites for good health.

What did we learn about child-health seeking in Lungwena?

The field study conducted in Lungwena was designed to assess lay perspectives on child health problems. Additionally, I used the material to analyze the association between childhood mortality and social network measures, treatment of childhood illnesses and contextual variables.

The main themes from the Lungwena study suggest the following: Childhood illnesses were in many ways problematic for the caretakers. Mothers were often uncertain about reaching a correct diagnosis for an illness. Therapy management was regarded as a venture based on trial and error where the members of extended family interacted in complex ways. Even if according to the cultural rule decision-making in the Yao culture belongs to the male members of extended family, mothers described themselves as active agents in child health related questions. The present study also established that among the Yao mothers, the relationship between local and modern medicine may be described as complementary or supplementary.

A key notion during the early steps of the study was that poverty was a serious constraint for mothers' choices about how to treat children's illnesses. As the citation in the beginning of this chapter indicates, lack of resources was – and still is – a matter of malnutrition and even starvation. Material or financial issues largely guided peoples' lives including child health-seeking. Lack of cash money was commonplace, especially for women. They needed to turn to male members of the family, mainly husbands and uncles,

mjomba, with their financial needs. Childhood illnesses turned into a financial matter if transportation was needed. Also some of the health care providers charged a fee.

Assessment of treatment of the most common childhood illnesses revealed a multitude of care practices. There were very few connecting points between lay knowledge and biomedical perspectives on childhood health problems. Mothers were largely unaware of biomedical explanations of symptoms, prevention and causation. Not surprisingly, they did not treat their children according to the logic of biomedicine. In general, however, the very same illnesses pose the main problem according to both biomedicine and local knowledge.

The chapter that addressed association between childhood mortality and child health-seeking showed that the presence of mjomba in the extended family was associated with lower odds of childhood mortality. Similarly, some factors that described the mother's preference for modern health care were associated with higher odds of survival amongst her children. Interestingly, the ability of some selected contextual factors (e.g. micro-economy and literacy) to explain childhood mortality was very poor in Lungwena.

Basically, the Lungwena study provided an additional case study to the considerable body of literature on child health-seeking. It is rather obvious that I can make no claim here as to the generalizability or typicality of the findings from the present study concerning other locations: there is no way to argue that mothers and families in any other site would give a similar account of child health-seeking. As I indicated earlier, findings in previous studies concerning child-health seeking, and health behavior more, generally are inconsistent. Thus, some of the empirical findings from Lungwena are supported by earlier literature, some are not. In sum, probably the most important indication from the study was that, on the whole, women's knowledge related to childhood health problems was adaptable, flexible and left space for negotiations.

Reconsidering aims, methods and findings

In the introductory chapter I left child health-seeking undefined by simply referring to a John Janzen's statement that "sickness is a departure and treatment an attempt to return" (Janzen 1981). Similarly, the aims of the research project that I outlined in the same chapter were very broad: I intended to examine child health-seeking in Lungwena in a systematic manner and to set it in a conceptual frame. What kind of picture of child health-seeking has the above examination provided?

Firstly, a word about the study design is needed. In which direction does it guide the definition of child health-seeking? The present research project does not easily fit into any single academic tradition because I used concepts, methods and literature from several disciplines including anthropology, epidemiology, sociology and medicine. As a result, child health-seeking appears as a multifaceted event, which is shaped by various sectors of a society including the health care and macroeconomic trends. The outcome of the research project is a description of child health-seeking as a complex interaction between the agency and the structure.

Despite the obvious advantages the design simultaneously leaves space for criticism. One significant criticism would emphasize the limitations of such an interdisciplinary approach, and claim that important aspects of child health-seeking have not been adequately covered. Such criticism is of course justified. An obvious shortcoming of the design is, for instance, that I did not promote the utilization of any specified method belonging to one of the study fields. Rather, I used my sociological imagination (Mills 1959). Additionally, because a broad approach was employed, I examined mothers' child health related responses in Lungwena as a whole instead of focusing on a single health problem. As a consequence the results do not dig very deep into the nature of particular illnesses.

Finally, while I chose not to observe childhood illness episodes, the focus of the study shifted from the actual behaviors towards the way lay people conceptualize child health-seeking, i.e. the local understanding about childhood illnesses and their appropriate treatment. In other words, the focus is on mothers' knowledge, perceptions and ways of reasoning. Thus, the design enabled me to approach the study population as respondents rather than mere data items. By taking this course, however, I lost the possibility of reading the interview materials as referring directly back to "reality".

All things considered, the present research did not produce a definition of child health-seeking. Neither did it suggest a methodological approach. Rather, the most important implication is that an examination of child health-seeking requires a contextually informed study design which also takes into account the fact that different approaches produce different findings. The final section below will look in more detail at how the different discourses on child health-seeking shape how we perceive child health, and more generally social change in developing countries.

14.2 Bringing the themes together: the discursive construction of child health-seeking

For the remaining part of the text I will put the empirical findings aside and look at the materials on a more abstract level. My aim is to bring together the themes that emerged from the examination above. This junction will offer space for discussing some of the very basic concepts in medical sociology. While the Lungwena study alone does not offer constituents for generalizations, the thread of this final chapter is to trace the more general implications of the above discussions: what would be worth noting if child health-seeking was to be studied in another location?

The thematic parts above have yielded a number of important lessons. The examination of child health in the three parts above may be reduced to two discourses: previous literature on child health, health-seeking and health behavior reveals the ways of constructing expert knowledge on child health seeking in the international (research) community, and interview materials from Lungwena outlined the view local people held about child health.

To start with, there is an obvious consensus about the poor health status of children in the developing countries: in both of the above mentioned discourses there is a point made of reducing high child mortality and morbidity. Similarly it is obvious that the view of child health problems in these discourses is disparate. The main points of divergence of expert and lay discourses are shown in table 69 below.

Table 69: Main points of expert discourse and lay discourse on child health.

	expert discourse	lay discourse
Problem definition	high child mortality is for a large part a behavioral problem	poverty causes high child mortality
Focus	treating (contagious) diseases	treating children
Fix for the problem	biomedical health care and health education	better (material) resources
Locus of responsibility	mothers	this remains as a research question for further studies
Approach	expert knowledge based on scientific neutrality and statistics	local knowledge based on personal experiences and common sense
Role of lay people	mothers are an obstacle for achieving good child health	mothers are active caretakers

As I stated above, expert knowledge draws mostly upon biomedical and demographic approaches and applied medical anthropology. This discourse is imposed on developing countries by powerful Western institutions and the research community. This discourse utilizes mainly biomedical reasoning and focuses on the treatment of diseases. The appeal of international child health programs has been largely based on the promise of their ability to save children's lives with simple and cheap interventions. Thus, it is the diseases that become the focus of intervention. Not surprisingly, a solution to child health problems is to prevent or to treat the diseases. It is taken as axiomatic that high child mortality is partially a consequence of mothers' incompetence to take care of the management of childhood diseases. In this conceptualization the responsibility of high child mortality is laid on the shoulders of the families, particularly the mothers: they are blamed for not seeking biomedical health care in a prompt and correct manner. Thus, the incompetent link appears to be the mothers. In this discourse, a dichotomy between the international community and the local people is constructed.

Much less is known about the lay discourse on health behavior. The role of local knowledge reserve is left marginalized in the powerful development discourse. In the few studies where local people are given a voice, they talk about their limited possibilities, options and resources to treat ailing children. Mothers put the blame for poor child health on the insufficient material and immaterial resources that hamper their behavior. The lay discourse on childhood illnesses in Lungwena that was examined in the present research shared very few elements with the expert domain. Mothers in Lungwena emphasized that the main obstacles to effective child health care were not knowing what to do or not being able to do the right thing.

More generally, the international community exercises a particular form of power (Petersen and Lupton 1996) while advancing their ideas about child health in developing countries. Ruthbeth Finerman (1995) has written that the habit of putting the blame on mothers "promotes a shortsighted and prejudicial world view regarding locus of responsibility and blame for child survival, and contributes to a warped application of health planning". From the viewpoint of the lay people, the current primary health care approach to child survival relies on local resources. It depends heavily on the caretakers' time, effort and knowledge. However, in most locations of the developing countries, women's arduous duties of hoeing, fetching firewood and water, pounding grain, cooking and childcare leave them with hardly any spare time. (Leslie 1989, Coreil 1991) Additionally, in Malawi like in many other developing countries, unpredictable droughts and floods regularly undermine rural livelihoods. According to Megan Vaughan, one of the most important effects of the 1992 drought (see chapter 7.4) was not the need which it created for imported food and the greater dependence on donors which this implied, but the

fact that it revealed the underlying reality of Malawian rural life, serious long-term malnutrition, and a marginal existence for many of the rural poor (Vaughan 1998).

Reconsidering power relations

The larger issue pertaining to the notion of these two discourses is that of power: who sets the agenda for child health-seeking studies and who sets the priorities of child health programmes? The international community influences health in developing countries through research, projects and lobbying (Brown 1997). Even if health programs seek support in scientific neutrality, biomedicine is socially and culturally constructed. Health interventions are often pushed by the donor community in order to show immediate results for the money invested. This does not allow for long-term policy planning or the chance of changing the conditions facing the vast majority of the population living in poor rural areas in the developing countries. Additionally, within this approach it is not possible to act up to the recognition that health is to a great extent determined by economic, political and social factors outside the formal health care sector. Peter Brown (1997) has even blamed child health programs for being “death control programs” without developing other sectors of society than health care. He has also noted that “enemy” diseases have typically been identified after medical cures and effective preventive measures are available. Thus, the focus of health programs has shifted according to the development of biomedical techniques, not according to actual child health problems.

It is obvious that at the present time, Western health technology has the ability to bring about change to the health conditions of many third world people. In the current biomedical model, however, local populations are placed in a position of dependence on the assistance of the outside expert (Packard 199). As I noted in the literature review, child health-seeking studies in developing countries are mainly empirical, they do not take advantage of concepts developed in health behavior research. At this point, however, two concepts derived from public health discussion concerning industrialized countries would take the discussion one step forward.

Victim-blaming, the tendency to view local inhabitants as part of the problem, has been discussed as a part of the more general consideration of power relations in health. The basic idea underlying this discussion is that victim-blaming attracts the attention away from the structural, political and economic causes of ill health (Lupton 1995). Robert Crawford (1977) wrote more than two decades ago that "victim-blaming ideology considers people to be individually responsible for their health at a time when they are becoming less capable as individuals of controlling their health environment".

Another concept from sociological literature that is worth considering in relation to child health-seeking in developing countries is (bio)medicalization. The standard custom of ignoring or undervaluing local realities in child health-seeking research leads to the custom of medicalizing the problem (Packard 1997). Solution to the adverse child health situation is directed towards breaking the immediate link between disease and poor child health. The term "bio" suggests that health and wellness are predominantly physical issues, which is the focus of the medical model (Loustaunau and Sobo 1997).

Future directions: a space for dialogue

It is essential to understand that neither assessment of child health status nor child health-seeking are straightforward extrapolations of biomedical facts. Rather, they are an outcome of various processes that take place within a context. In the light of previous studies, there is a reason to believe that the success of health development depends on a combination of appropriate technology, sound health care delivery, and social and economic changes affecting households and communities (Berman et al. 1994).

The text above looked at the relationship between international research community and local mothers in Lungwena in terms of confrontation. Yet, an important future issue concerns dialogue: where do the discourses meet? Despite the black and white lens through which I described previous research producing mothers as incompetent, powerless and impoverished, several recent studies support a view of mothers with ill children as responsive and realistic actors (Finerman 1995). Still, much more account must be taken in international development of the perspectives of the poor people themselves. This requires additional attention to study design and methodology and concepts that are utilized. New lines of inquiry could be found if the methodology of health behavior research that concerns developed countries were to be critically utilized. This would enable the shift from an extensively medical model to a model that would appreciate local knowledge. Examples of focal questions in this discourse would include how are women's needs met by health care programs, the local social safety nets, women's multiple roles and the hardships of everyday life.

Additionally, the findings of the present research support the importance of local realities for child health-seeking. However, there is also a countertendency to build universally satisfactory models for studying child health. This kind of a model attempts to take into consideration all the factors that have an effect on children's well being and judge their relative importance. The disadvantage of a model would be that it does not allow

space for local realities and local knowledge. An integral part of the model would be to show the pathways that intermediate between different levels of society. The significance of this kind of modeling cannot be denied but they have proven to be of more theoretical than practical significance. Child well-being and sickness is such a many layered phenomena that it is hard to fully understand with any single model.

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Looking forward to summer 2003

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Appendix

Appendix 1: country setting in Malawi

The section below aims at offering a brief orientation to the country setting in Malawi by describing key indicators, basic geographical facts and main lines of history. I have no intention to show a link between this information and child health.

Key indicators

geography	
total area (km ²)	118 000 ¹
land area (km ²)	94.3 ¹
population	9.9 million ¹
population annual growth rate	3.3 ⁵
population doubling time	21 years ⁴
population under age 15(as of total)	46.4 % ³
total fertility rate	7.6 (1977) ¹
	6.2 (1998) ¹
life expectancy at birth	40.0 years (males) ¹
	44.0 years (females) ¹
population density (people / km ²)	59 (1977) ¹
	105 (1998) ¹
% of urban population	14 ¹
child health indicators	
under-5 mortality rate	215 ²
infant mortality rate	132 ²
% of underweight children	30 ³
health care indicators	
public expenditure on health (as % of GDP)	2.8 ³
one physician for	52,893 people ⁴
one nurse for	2978 people ⁴
a hospital bed for	7127 people ⁴
economic indicators	
GNP per capita (US \$)	190 ²
poverty (% below national poverty line)	54 ²
human development index	151 (out of 162 countries) ³
education	
public expenditure on education (as % of GNP)	5.4 (1995-97) ³
adult literacy rate	72.1 (men) ¹
	48.6 (women) ¹
primary net enrolment rate	48 ⁵
% of primary school entrants reaching grade 5	34

Sources:

1 Malawi Demographic and Health Survey 1992 (1994).

2 The State of the World's Children (Unicef 2001)

3 UNDP (1997)

4 UN in Malawi and GOM (1993)

5 World Bank (1996)

Geography

The graph below shows a map of Africa indicating Malawi and the study site. Malawi is a lengthy and narrow shaped country is situated in South-Eastern Africa, south of the Equator in the East African Rift Valley system. It is bordered by Mozambique in the south and east, Zambia to the west, and Tanzania to the east and north. The total surface area of Malawi is 118 000 km² making it a fairly small country (one third of the size of Finland). Lake Malawi at 474 meters above the mean sea level and other smaller lakes take up one-fifth of the area.

Landscape in Malawi varies widely: in the North there are high plateaus and mountains that reach to the height between 2000-3000 meters. Highest peak is Mount Mulanje at 3050 meter. Both the Central Region and the South Region consists of low-lying lakeshore and bordering plateaus. This is the kind of landscape where Lungwena, the study area is located.

Year cycle in Malawi consists of three distinct seasons. Normally, the hot and dry season lasts from September to mid-December. At that time temperatures stays at 35 to 40°C in the low parts of the country such as the Rift Valley. Towards December humidity starts increasing and the rains usually start falling down from mid-December to April. Depending on the part of the country, the total amount of rainfall is between 700 to 1500 millimetres. Temperature gradually drops towards the end of the rainy season. The rest of the year, from May to August, is dry and rather temper with temperatures around 20 to 25°C.

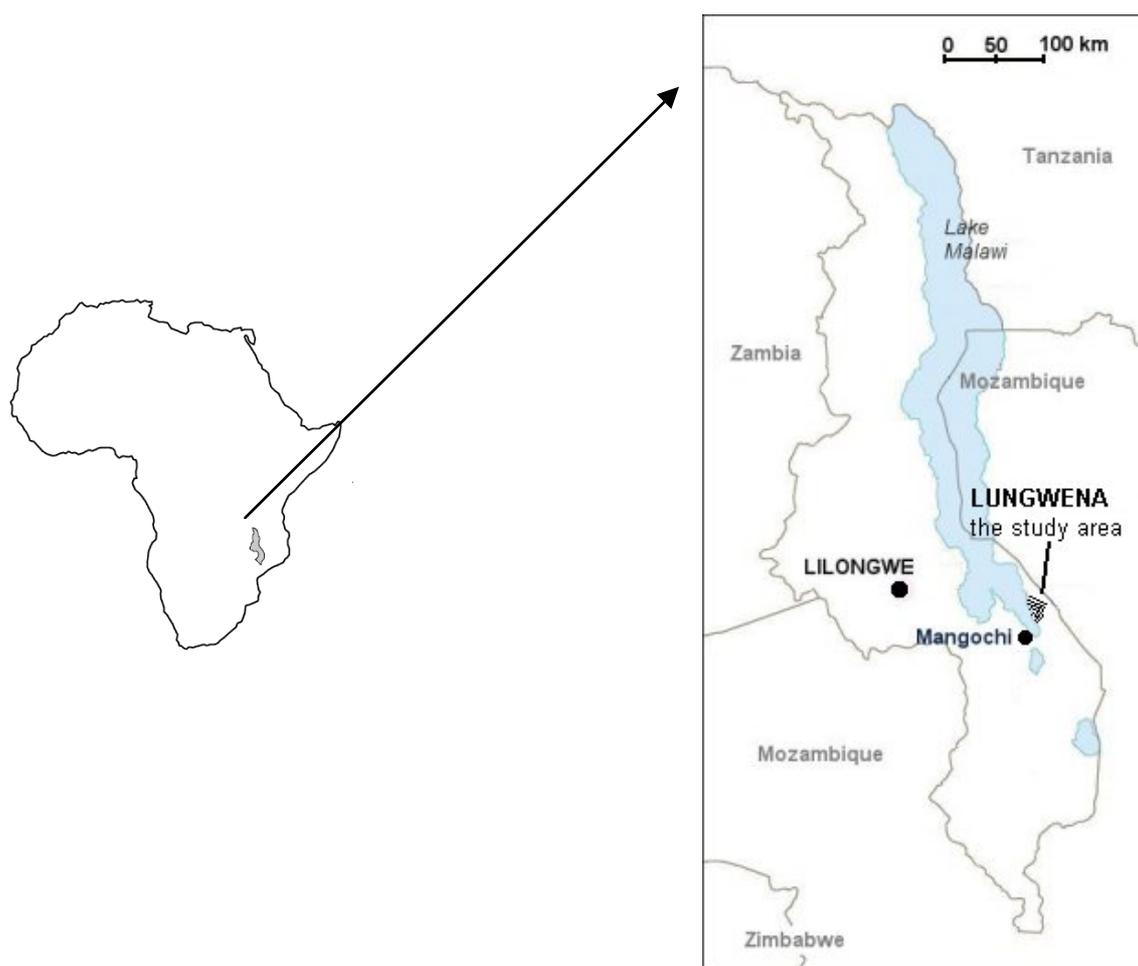
Overview of history

There are three distinct phases in the history Malawi: pre-colonial time, colonial period and time after independence.¹³⁷ All of these periods are importantly present in the contemporary nation.

The earliest information from the area of the present day Malawi is about the settlement of different ethnic groups there. The pygmies were the first people to inhabit the region. Around 1300 A.D. migrations from West Africa were spreading southwards down and Bantu people gradually conquered the area. During the 16th century Bantu speakers known as Marawi settled there. Their empire was a very loosely organised society covering a large territory, which extended well beyond the current borders of Malawi. Until the first half of the 19th century there were several migrations into the area. (King and King 1992, Grauers et al. 1997, Mvula and Kakhongwa 1997). Because of these migrations, Malawians today belong to a large diversity of ethnic groups, all of which are of Bantu origin. The tribal systems as well as many tribal customs have their roots in the pre-colonial era. Official languages of Malawi are English and Chi-Chewa but there are about 20 additional Bantu languages spoken in the country.

¹³⁷ A book titled A history of South and Central Africa by Derek Wilson (1975) contains a comprehensive presentation of the history of Malawi.

A map showing Malawi and Lungwena, the study site



David Livingstone, an explorer and a missionary, who crossed the territory in the 1850s, first introduced European influence in the area. Referring to East Africa, he gave his famous speech in the British senate in 1857 saying that he "wants to make an open path for commerce and Christianity". This was the onset for the British colonialization. The colonialists called the nation Nyasaland. In 1891 Nyasaland was claimed as a British protectorate. (King and King 1992, Grauers et al. 1997) During the years of colonialization, however, Nyasaland did not evoke much British interest or attention (Pryor 1990).

In 1964, after a few years of unrest, Nyasaland became independent Malawi¹³⁸. Dr. Hastings Kamuzu Banda, who had played an active role in opposing colonial powers became the first prime minister and the first president a couple of years later. His party (Malawi Congress Party, MCP) established itself as the only party permitted. In 1970 Banda was elected president for life as part of an increasingly powerful concentration of power around the president and his party. The administration became more and more despotic and totalitarian, and human rights were systematically violated. (Grauers et al. 1997, Mvula and

¹³⁸ For a detailed description of struggle for independency see for example Grauers et al. (1997).

Kakhongwa 1997) Actual political centralization was much stronger than the political structure would suggest (Pryor 1990).

At the beginning of 1990s resistance to the old rule grew markedly both internally and internationally. In 1992 the government was exposed to unprecedented criticism from the influential Roman Catholic Church in Malawi. The bishops publicised a strong critique directed towards president Banda. This was followed by criticism from the donor community and withholding of assistance. The process ended up in a watershed in the history of independent Malawi, the first multi-party elections in 1994. After 30 years of rule, president Banda's long regime ended.

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Appendix 3: survey questionnaire

CHILD HEALTH SEEKING IN LUNGWENA

0. Interviewer comments:

(to be filled out after the interview)

- 0.0. Interviewer's name + date _____
- 0.1. Village of interview _____
- 0.2. Time used to find the interviewee:
arrive at village _____ o'clock
found her _____ o'clock
total _____ minutes
- 0.3. Time used for the interview:
start _____ o'clock
finish _____ o'clock
total _____ minutes
- 0.4. How is the general outlook of the house?
neat and clean _____ in a good conditon
uncleaned _____ needs repairing
- 0.5. What are the builing materials of the house?
roof _____
windows _____
walls _____
- 0.6. Does the mother look healthy _____ yes
if no, what are the problems _____ no

- 0.7. Do the children look healthy _____ yes
if no, what are the problems _____ no

- 0.8. Your own remarks

Kumajigana nao wandu pa kulisa lina lakwe niyakusosekwa mkumajiganamo!

Introduce yourself and the project!

- 1.7. Ana akwete katundu jwantuli kunyumbako? Akwete mpela ... ?
What kind of valuable things do you own? Such as ...
- | | | |
|-----------------------|----------------------------|-------|
| mbusi <i>goats</i> | Silingwa? <i>How many?</i> | _____ |
| ng'ombe <i>cows</i> | Silingwa? <i>How many?</i> | _____ |
| nguku <i>chicken</i> | Silingwa? <i>How many?</i> | _____ |
| wailesi <i>radio</i> | | |
| njinga <i>bicycle</i> | | |

Kapene soni kwana ndundu sine syakwe, alongosole chonde?
Something else, could you tell more about it?

- 1.8. Ana indu mpelaga ayi akwete pa nyumba pao?
Can you tell me which of the following household amenities do you have?
- | | |
|-----------------------------|--|
| chimbusi <i>pit latrine</i> | chitandala cha mbale <i>dish rack</i> |
| libulangeti <i>blanket</i> | lisimbo lyakwasa iswani <i>rubbish pit</i> |
| chowela <i>bath house</i> | matelesi <i>mattress</i> |

- 1.9. Ana asyesyene nyumba jakutamajo wani? *Who owns the house where you live?*
 jangu *myself* jaasyene, wani ? *else, specify*
-

- 1.10. Ana mpela panyumbapo wakutenda masengo gakusosa yakusosa kwa mpelaga yakulya ni mbiya wani? *Who is the person who does the most to provide for the economic needs of the household, for example food or money?*
- | | |
|-----------------------------|---|
| nimsyene <i>myself</i> | walume wangu <i>my husband</i> |
| mama wangu <i>my mother</i> | baba wangu <i>my father</i> |
| | waneniwane, wani? <i>other, specify</i> |
-
-

2. Children

Sambano ngusaka kwausya wanache wosepe waweleche pampepe chitandirire cha uwelesi wawo. *Now I would like to ask you about the total number of children that you have given birth to ever since you started reproducing.*

- 2.1. Akwete wanache walingwa? _____
How many children do you have?
- 2.2. Nambi wanache wali chijumi niwalingwa? _____
How many of your children are alive at the moment?
- 2.3. Mwanache jwao jwandanda akwete yaka ilingwa? _____yrs (estimated)
How old is your first-born child now?
- 2.4. Nambi jwakumalichisya kupagwajo jwana yaka ilingwa? _____yrs (estimated.)
And how young is your youngest child?

2.5. Ngusaka kumanyirira ya wanache wosepe mwawerechere kutandaga ni jwandanda.

Now I would like to learn about all of your children starting from the first born

	Ana lina lya mwanachejo wani?	Ana babagwe mwanachejo linachi?	Ana walombene ni babagwe mwanachejo?	Ana babagwe akutama kwapi?	Ana mwanachejo akutama kwapi? Jwajasiche? Lyuwachi?
	<i>What is the name of the child?</i>	<i>Who is the father of the child?</i>	<i>Were you married to him?</i>	<i>Where does the father live now?</i>	<i>Where does the child live now? If died, when?</i>
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					

Ask to see the U-5 clinique card of the last born child and fill in the following information

TOTAL _____
 ALIVE _____
 DEAD _____

card not found

3) Wapamtundu / Panlango *Extended family*

Ligongo lakuti wandu wapaulongo wakusosekwa pamlango kusalilana nao indu yineni yine mpelaga ya wanache wetu, kapena mwanagwetu maka maka kuti atukamuchisye kulela chenene mwa utundu kapena lukosyo lwakwe. Ni sambano une soni tinausyejepe mawusyo ga yeleyo.

I will now ask some questions about your extended family because sometimes you talk with relatives when you make decisions about child care.

- 3.1. Achalongo achimjawo wakutama nawo pamusi pampepe wani?
Which of the following people live in the same village with you?

if NOT ask: Kwakutalika uli? Musi chi? *Where? Village?*

baba wangu *my father*

mama wangu *my mother*

akuru wao mama *elder sister to my mother*

apwao mama *younger sisters to my mother*

mjomba *my uncle*

achimwene wakulungwa *my eldest brother*

mwanja achimwene *my brothers*

mwanja chemwali *my sisters*

akwegwe wakongwe *my mother-in-law*

akwegwe walume *my father-in-law*

anganga wakongwe wakuchikongwe

my grandmother

Ane kumangwenu kwapi?

Where do you come from? Your own village?

- 3.2. Ana pa nlango wao akulolela wani? Achichi wao waojo weleo?
Who is the head of your extended family? How is (s)he related to you?

Wana yaka ilingwa? _____ yrs (est.) wakongwe *female*
How old is (s)he? walume *male*

Akutama nawo musu umo? EE *yes*
Does (s)he live in the same village with you? IAI *no*

if NO ask: Akutama kwakutalika uli? *how far? (km / time)*
Musi chi? *name of the village?*

Ana wasomile sukulu yaka ilingwa? _____
How many years has (s)he been to school?

Ana wakombolaga kuwalanga ni kulemba?
Can (s)he read and write?
IAI no

EE yes

- 3.3 Sambano tininje kwausya ngani ja indu kapena katundu jwa kwete achalongoajao pa nlango paopo kuti manyilire wali wakusosekwa niwakupeleka chikamuchisyo ku wandu wa pa nlangopo. Pepani ngawa chipongwe.

Now, I am going to ask some questions about the property of some of your relatives because we would like to learn who are the important people within the extended family.

Chandanda ngusaka kumanyilila indu ya kwete wankwao ? Akwete inyama ----?

Could you first tell me a little about your husband. Does he own valuable things such as ---?

mbusi goats	Silingwa? How many?	_____
ng'ombe cows	Silingwa? How many?	_____
nguku chicken	Silingwa? How many?	_____

Akwete wailesi?
liboti boat
nyumba jambone nice house
njinga bicycle
yine yichichi? something else, specify

Wasomile sukulu yaka ilingwa? How many years has he been to school? _____

Ana wakombolaga kuwalanga ni kulemba?
Can he read and write?

EE yes
IAI no

- 3.4. Nambi anjomba waowo akwete ichichi? Asale mpelaga inyama ?
Next I would like to ask about the mjomba. Does he own animals such as ---?

mbusi goats	Silingwa? How many?	_____
ng'ombe cows	Silingwa? How many?	_____
nguku chicken	Silingwa? How many?	_____

Akwete wailesi?
liboti boat
nyumba jambone nice house
njinga bicycle
yine yichichi? something else, specify

Wasomile sukulu yaka ilingwa? How many years has he been to school? _____

Ana wakombolaga kuwalanga ni kulemba?
Can he read and write?

EE yes
IAI no

3.5. **if the head of the family is NOT njomba or husband, ask:**

Nambi ----- waowo akwete ichichi? Asale mpelaga inyama ?

What about about the ----- . Does he own animals such as ---?

mbusi <i>goats</i>	Silingwa? <i>How many?</i>	_____
ng'ombe <i>cows</i>	Silingwa? <i>How many?</i>	_____
nguku <i>chicken</i>	Silingwa? <i>How many?</i>	_____

Akwete wailesi? *radio*
 liboti *boat*
 nyumba jambone *nice house*
 njinga *bicycle*
 yine yichichi? *something else, specify*

Wasomile sukulu yaka ilingwa? *How many years has (s)he been to school?* _____

Ana wakombolaga kuwalanga ni kulemba?	EE <i>yes</i>
<i>Can (s)he read and write?</i>	IAI <i>no</i>

3.6. Ana mwa achalongo ajawowa wakusichila mnope panlangopo wani?

Who of your relatives is the richest?

uneji <i>myself</i>	mjomba <i>my uncle</i>
wankwangu <i>my husband</i>	aganga wakongwe wakulungwa
baba wangu <i>my father</i>	<i>my grandmother</i>
mama wangu <i>my mother</i>	akwegwe wakongwe <i>my mother-in-law</i>
achimwene wakulungwa	akwegwe walume <i>my father-in-law</i>
<i>my eldest brother</i>	wane wene, wasaleo <i>other, specify</i>

Malinga ni nganisyo syawo wani wakusapeleka nganisyo syambone pa wumi wa wawanache wawo pa nlango pawo? *To your opinion, who is the most important person when decisions that concern the health of your children are made?*

nansyene <i>myself</i>	babagwe mwanache <i>father of the child</i>
wankwangu <i>my husband</i>	aganga wakongwe wakuchikongwe
baba wangu <i>my father</i>	<i>my grandmother</i>
mama wangu <i>my mother</i>	akwegwe walume <i>my father-in-law</i>
mjomba <i>my uncle</i>	akwegwe wakongwe <i>mother-in-law</i>
achimwene wakulungwa	wane wakwe, wani? <i>other, specify</i>
<i>my eldest brother</i>	

3.8. Naga mwanache jwenu alwasile, nkasautuchila kumpa ntela wakuumanyilila mwasyene kapena nkasimwasya wane? Welewo wani? *When your child is sick do you treat him with medicine best known to yourself or do you consult someone? Whom?*

3.9. Ana mwanache ali nkulwalika mnope mnyumba mwao akusiwamanyisya wani ya ulweleo? *Whom do you inform when your child is more seriously sick?*

momba <i>my uncle</i>	anganga wakongwe wakuchikongwe
wankwangu <i>my husband</i>	<i>my grandmother</i>
babagwe mwanache	wane ni wane, alongosole <i>other, specify</i>
<i>father of the child</i>	
mama wangu <i>my mother</i>	
baba wangu <i>my father</i>	

3.10. Ana mwamagongo gantuli gankusimwasalira mjomba ya ulwele wa mwanache jwenu? *In what kind of occasions is it necessary to inform the mjomba about the disease of your child?*

3.11. Nambi pana ndawi jine jimwasalire mjomba wenu ya mwanache jwenu? *Have you ever called him in to see your child?*

IAI *no*

EE *yes*

If YES ask: Lyuwachi? *When?*

4) Decision making about childhood diseases

Sambano ngwete soni yakuti nausye yakumbali ja ulwele wa mwanache. Ana akusaganisya yantuli mwanache ali nkulwala maka maka kuti apate chikamuchisyo cha ntela wa mbone ku chilwele cha mwanachejo. Soni akusiwakamuchisyaga wani.

I have now some general questions about how you choose the treatment for the diseases of your children, with whom do you talk to, and who helps you to decide.

4.1 Ana wakuumanyilila mwachitema kuti mwanache akulwala wani?

Who usually recognizes first that your child is sick?

une nansyene *myself*

wankwangu *my husband*

mama wangu *my mother*

baba wangu *my father*

wane wakwe, alongosole wani

other, specify

4.2. Naga mumbweni mwanache jwenu kuti akulwala, chichi nsatenda chandanda?
When you notice that your child is sick what do you do first ?

Kwamba kwalola pakuti ndawi sine akusawa chenene mwachitema

I do nothing, they usually get better by themselves

Ngusinapa ntela wachikuda *I give them some traditional medicine*

Ngusinjala kusuma ntela kusitolo ni kwapa kumwa mpela wamapilisi

I give them some modern medicine

Kwaula nao wanacheo kwa sing'anga *I take them to sing'anga*

Kwaula nao ku chipatala *I take them to the chipatala*

Kapena ...*else, specify*

4.3. Nambi naga alinkusaka kuti mwanachejo akapate ntela malingana ni mwakulwalilamo akusiwasalila wani kuti wajiganye yakutenda?

Whom do you turn to if you think that the child needs treatment and you want to ask advice about it?

wankwangu *my husband*

akwegwe wakongwe *my mother-in-law*

babagwe mwanache

akwegwe walume *my father-in-law*

father of the child

mjomba *my uncle*

mama wangu *my mother*

achimwene wakulungwa *my eldest broher*

baba wangu *my father*

wane wakwe, wani? *other, specify*

achimjangu *my friends*

anganga wakongwe

wakuchikongwe *my grandmother*

4.4. Nambi naga mwanachejo ampele ntela nambo ngawukukamula niwani akusiwaji ganya kapena kwasalila ya kuti atende?

If the child does not get better with the first treatment, who can then give good advice?

wankwangu *my husband*

akwegwe wakongwe *my mother-in-law*

babagwe mwanache

akwegwe walume *my father-in-law*

father of the child

mjomba *my uncle*

mama wangu *my mother*

achimwene wakulungwa *my eldest broher*

baba wangu *my father*

wane wakwe, wani? *other, specify*

achimjangu *my friends*

anganga wakongwe

wakuchikongwe *my grandmother*

4.5. Kapena waojo ngakukulupilila niyakusala wandu wakulekangana, yatela wambone. Kapena wandu akwalambusya, akusiwasalila wani kuti wasalire yakuonaonape? *If you are uncertain about the right treatment and people give you different advice, whose consent do you seek?*

wankwangu *my husband*

anganga wakongwe

babagwe mwanache

wakuchikongwe *my grandmother*

father of the child

mjomba *my uncle*

achimjangu *my friends*

achimwene wakulungwa *my eldest broher*

mama wangu *my mother*

wane wakwe, wani? *other, specify*

baba wangu *my father*

- 4.6. Ana yakombolekaga kwakanila ----- naga aiweni kuti yaunami?
Is it possible for you to decide against the opinion of --- ?

- 4.7. Ana wani nsatawana nao ya ulendo waku ntela, naga mwanache jwenu akusosekwa kuti akapocheleje mtela kwa asing'anga kapena ku chipatala? *If the child needs treatment outside your own home, for example at sing'anga or at the chipatala, with whom do you have to agree about that?*
- | | |
|------------------------------|---|
| wankwangu <i>my husband</i> | akwegwe wakongwe <i>my mother-in-law</i> |
| babagwe mwanache | akwegwe walume <i>my father-in-law</i> |
| <i>father of the child</i> | mjomba <i>my uncle</i> |
| mama wangu <i>my mother</i> | achimwene wakulungwa <i>my eldest brother</i> |
| baba wangu <i>my father</i> | wane wakwe, wani? <i>other, specify</i> |
| achimjangu <i>my friends</i> | |

anganga wakongwe

wakuchikongwe *my grandmother*

5. Medication and treatment

Sambano ngusaka kuusya iwusyo yamitela jakulekangalekangana jakwankunonyela mwejo kumpa mwanache jwenu.

Now, I would like to pose some questions about different kind of medication that you use for childhood diseases.

- 5.1. Nambi naga mwanache jwenu alwasile, mtela wandanda unkasimumpa ni watuli?
When your child falls sick, what kind of medication do you use first?

- 5.2. Naga mwanachejo ngakusimana chenene ni mtela wakunyumbako, chine chinmkusatenda ni chichi?
If the child does not get better with the medication that is available at home what else can you do?

mwanachejo basi alwalejepe *the child just suffers*
kwawilanga mjomba *I send a message to my uncle*
Kumjigalila kwa asing'anga *I take the child to sing'anga*
Kumjigalila kuchipatala *I take the child to chipatala*
kapena ... *else, specify* _____

5.3. Nambi naga ali nkusosa kulipila makobili kwa sing'anga kapena ku chipatala aliampele ntela mwanachejo. Wani akusalipila?
If you need to pay for the treatment of your child at sing'anga or chipatala, who will take care of it?
 wankwangu *my husband* akwegwe wakongwe *my mother-in-law*
 babagwe mwanache *father of the child* akwegwe walume *my father-in-law*
 mama wangu *my mother* mjomba *my uncle*
 baba wangu *my father* achimwene wakulungwa *my eldest brother*
 achimjangu *my friends* wane wakwe, wani? *other, specify*
 anganga wakongwe _____
 wakuchikongwe *my grandmother* _____

5.4. Ana pakwete pawakongwele makobili kuti asosele ntela wamwanache?
Have you ever borrowed money to have your child treated?
 EE *yes* IAI *no*

5.5. Ana akusatenda chichi naga am'bwani kuti mwanachejo akulwalika jwakusosa kupata ntela mwachitema chitema? *What do you do if you think that the child is seriously ill and needs help urgently?*
 Ngusautuchila kwa asing'anga nansyene I take the child to sing'anga myself
 Ngusautuchila najo kuchipatala I take the child to chipatala myself
 Kapena *else, specify* _____

5.6. Ana wani wakusaganisya ya mitela pa ulwele wetoperere?
If the disease lasts for a longer period, who are the people that decide about treatment?

6) Childhood diseases

Soni tinausyeje sambano ya ilwele ya wanache wamwana ni mitela jakusiwapaga mpelaga jamanja achinangolo wa wanachewa?
I will now ask your opinion as a mother about normal childhood diseases and the best treatment for them.

6.1. Ana yakusausya mu umi wawanachewa pakutama mmusi mu che ---- ? Ilwele yakwe niyapi?
Can you tell me about child health problems in ---- village? What are the most common childhood diseases?

_____	_____
_____	_____
_____	_____
_____	_____

IF SHE MENTIONS MORE THAN FIVE, ASK:

Mwa yele ilweleyi ayisale yilwele nsanu yakusalwalaga wanachewa kawiri-kawiri?
Could you choose the five most common of them?

6.2. Sambano tinausyeje mena ga ilweleyi ni imanyisyo yakwe.
Now I will ask some detailed questions about the diseases that you mentioned.

A. **CHILWELECHI** _____

Name of the disease

- Akusamanyilila uli kuti mwanachejo akulwala ---- ?
How do you know that a child has -----?

- Ikusiyajigalila ndawi jantuli kuti aganisye yakupochera ntela wakasanya nchiru mwachitema?
What is your opinion, how urgently does the child need treatment for --- ?

Ntelachi wa ----- akusampaga pa ndanda pene? *What kind of treatment do you first use for it?*

Nambi mwanachejo achilyaga wele ntela akusatama masiku galingwa akanapole ? *How soon does the child usually get better with that treatment?*

Naga mwanachejo akupochela ntela ula nambo ngakusimanape chenene pana ine yakusatenda mwine kumpa ntela wine wakwe?

What if the child does not get better with that first treatment? Are there any other ways to treat ---?

IAI no

Ee yes

If YES ask: Alongosole chonde? *Could you tell me more about it?*

- Nambi akuganisya kuti ikusatandisya chichi kuti wanachewa alwaleje ----- ?
What do you think causes - --?

- Ana pana matala gakuti yeleyi ni kuiwambala kuti wanachewa yikapataga?
Can you somehow prevent that your children do not get ---- ?

IAI no

EE yes

If YES ask: Chantuli? *How?*

B. CHILWELECHI _____

Name of the disease

- Akusamanyilila uli kuti mwanachejo akulwala ---- ?
How do you know that a child has -----?

- Ikusiyajigalila ndawi jantuli kuti aganisye yakupochera ntela wakasanya nchiru mwachitema?
What is your opinion, how urgently does the child need treatment for --- ?

Ntelachi wa ----- akusampaga pa ndanda pene? *What kind of treatment do you first use for it?*

Nambi mwanachejo achilyaga wele ntela akusatama masiku galingwa akanapole ? *How soon does the child usually get better with that treatment?*

Naga mwanachejo akupochela ntela ula nambo ngakusimanape chenene pana ine yakusatenda mwine kumpa ntela wine wakwe?

What if the child does not get better with that first treatment? Are there any other ways to treat ---?

IAI no

Ee yes

If YES ask: Alongosole chonde? *Could you tell me more about it?*

- Nambi akuganisya kuti ikusatandisya chichi kuti wanachewa alwaleje ---- ?
What do you think causes - --?

- Ana pana matala gakuti yeleyi ni kuiwambala kuti wanachewa yikapataga?
Can you somehow prevent that your children do not get ---- ?

IAI no

EE yes

If YES ask: Chantuli? *How?*

C. **CHILWELECHI** _____

Name of the disease

- Akusamanyilila uli kuti mwanachejo akulwala ---- ?
How do you know that a child has -----?

- Ikusiyajigalila ndawi jantuli kuti aganisye yakupochera ntela wakasanya nchiru mwachitema?
What is your opinion, how urgently does the child need treatment for --- ?

Ntelachi wa ----- akusampaga pa ndanda pene? *What kind of treatment do you first use for it?*

Nambi mwanachejo achilyaga wele ntela akusatama masiku galingwa akanapole ? *How soon does the child usually get better with that treatment?*

Naga mwanachejo akupochela ntela ula nambo ngakusimanape chenene pana ine yakusatenda mwine kumpa ntela wine wakwe?

What if the child does not get better with that first treatment? Are there any other ways to treat ---?

IAI no

Ee yes

If YES ask: Alongosole chonde? *Could you tell me more about it?*

- Nambi akuganisya kuti ikusatandisya chichi kuti wanachewa alwaleje ---- ?
What do you think causes - --?

- Ana pana matala gakuti yeleyi ni kuiwambala kuti wanachewa yikapataga?
Can you somehow prevent that your children do not get ---- ?

IAI no

EE yes

If YES ask: Chantuli? *How?*

D. CHILWELECHI _____

Name of the disease

- Akusamanyilila uli kuti mwanachejo akulwala ---- ?
How do you know that a child has -----?

- Ikusiyajigalila ndawi jantuli kuti aganisye yakupochera ntela wakasanya nchiru mwachitema?
What is your opinion, how urgently does the child need treatment for --- ?

Ntelachi wa ----- akusampaga pa ndanda pene? *What kind of treatment do you first use for it?*

Nambi mwanachejo achilyaga wele ntela akusatama masiku galingwa akanapole ? *How soon does the child usually get better with that treatment?*

Naga mwanachejo akupochela ntela ula nambo ngakusimanape chenene pana ine yakusatenda mwine kumpa ntela wine wakwe?

What if the child does not get better with that first treatment? Are there any other ways to treat ---?

IAI no

Ee yes

If YES ask: Alongosole chonde? *Could you tell me more about it?*

- Nambi akuganisya kuti ikusatandisya chichi kuti wanachewa alwaleje ---- ?
What do you think causes - --?

- Ana pana matala gakuti yeleyi ni kuiwambala kuti wanachewa yikapataga?
Can you somehow prevent that your children do not get ---- ?

IAI no

EE yes

If YES ask: Chantuli? *How?*

E. CHILWELECHI _____

Name of the disease

- Akusamanyilila uli kuti mwanachejo akulwala ---- ?

How do you know that a child has -----?

- Ikusiyajigalila ndawi jantuli kuti aganisye yakupochera ntela wakasanya nchiru mwachitema?

What is your opinion, how urgently does the child need treatment for --- ?

Ntelachi wa ----- akusampaga pa ndanda pene? *What kind of treatment do you first use for it?*

Nambi mwanachejo achilyaga wele ntela akusatama masiku galingwa akanapole ? *How soon does the child usually get better with that treatment?*

Naga mwanachejo akupochela ntela ula nambo ngakusimanape chenene pana ine yakusatenda mwine kumpa ntela wine wakwe?

What if the child does not get better with that first treatment? Are there any other ways to treat ---?

IAI no

Ee yes

If YES ask: Alongosole chonde? *Could you tell me more about it?*

- Nambi akuganisya kuti ikusatandisya chichi kuti wanachewa alwaleje ---- ?

What do you think causes - --?

- Ana pana matala gakuti yeleyi ni kuiwambala kuti wanachewa yikapataga?

Can you somehow prevent that your children do not get ---- ?

IAI no

EE yes

If YES ask: Chantuli? *How?*

7. Chipatala versus sing'anga

Jamanja atite kuti ndawi sine yele ilwele ya wanacheyi ikusasosekwa kuisosela mitela. Ni soni mitelajo ngawa kuti jikusawa jakulila pamusi pepo iai nambo kwendelaga mwine ulendo kwa sing'anga kapena kuchipatala ngati nyoyo?

Apa kwene kwene ngusaka kwa salichisya kuti ngusaka kumanyilila matala ga kusajendechesya. Ni chonde alinje kusala muikusawelaga ngawa kwamba kusala indu yakuganichisya iai. Maganiso gawo ngukulupilila kuti tigachikamula masengo msogolomuno chitukuko chili chikwanile kwekuno.

You said, that childhood diseases sometimes may need treatment outside home. Now, I would like to pose some questions about such situations. At this point I would like to emphasise that we need to know how things are in reality. So please give us your true opinions and not the answers that you think we might want to hear. All the opinions are valuable when services in this area are developed.

- 7.1. Ana pana ilwele yine yawanacheyi yangakomboleka kupola kapena yangasosela ntela kwene?
Are there such childhood diseases that it is no use trying to cure them?

EE *yes*

IAI *no*

If YES ask: Aisale yele yilweleyi? *Could you list these diseases?*

- 7.2. Ana jamanja naga wapele upile wakuti asagule kuli ntela usyesyene wakupolesya yele ilweleyi yawanache mpaka ajaule kwapi?

If you can choose yourself, what is usually more efficient treatment for childhood diseases?

chipatala,
sing'anga
kapena else

- 7.3. Ana yakomboleka kupochela mtela wa mwanache jwenu wakungulo kwenu?
Tell me straight, is it possible for you to have the kind of treatment for your children that you want?

- 7.4. Ana panayine mwa ilweleyi yati ikusawa bola ku chipatala?
Are there certain childhood diseases that are better be treated at the chipatala?

IAI *no*

EE *yes*

If YES ask: Ilwelechi aisale? *Which diseases?*

7.5. Ana panayine mwa ilweleyi yati ikusapola kwa sing'angape?

Are there certain childhood diseases that require treatment by a sing'anga?

IAI *no*

EE *yes* **If YES ask:** Ilwelechi aisale? *Which diseases?*

7.6. Ana wanachewawo pakwete papochele ntela kuchipatala ali nkulwala?

Have your children ever been treated in the chipatala?

IAI *no*

EE *yes*

If YES ask: Kwali walwalaga ulwelechi? *What kind of complaints did they have?*

Ni wajikutile kuti nditu kuti chipatala chambone chakupolesyaga ilwele?

Were you satisfied with the treatment they got?

IAI *no*

magongo

EE *yes*

reasons

7.7. Kwali ilwelechi yiwalwasile wanachewa ni wapochele chikamuchisyo cha ntela kwa sing'anga?

For what kind of problems of your children have you used sing'anga?

Ni nombe wajikutile kuti iai sing'anga jo wapeleche ntela wakuona?

Were you satisfied with the treatment?

IAI *no*

magongo

EE *yes*

reasons

7.8. Ana kwakusasaka kwaula najo mwanache kuchipatala, kundandako akusajaula chipatala chakwe chapi?

When you want to go to the chipatala, do go first to

Malindi,

Mangochi, kapena

Lungwena

kwine *other*

7.9. Ana akusajenda pa chichi ulendo waku chipatalao naga mwanache jwamnondi ali nkulwala?

How do you get to the chipatala if your small child is sick?

kwenda pansi mwanache ali kunyuma *I walk and carry the child*

akusatujigala pa njinga *somebody takes us by bicycle*

kwela kwa galimoto ja wane *somebody takes us by motorvehicle*

kapena *else*

7.10. Nambi naga mwanache jwankulire akulwala, nkasimunjigala uli wakuchipatala?

What if your child is a bit older, how do you carry him/ her to the hospital?

kwenda pansi mwanache ali kunyuma *I walk and carry the child*

akusatujigala pa njinga *somebody takes us by bicycle*

kwela kwa galimoto ja wane *somebody takes us by motorvehicle*

kapena *else*

8. Value of children

Mausyo gangu ga kumalisya sambano ni gakuti manyilile yakuganisya kuti mmawasa mwao muweje mwana wanache walingwa.

My last set of questions is about what you think is suitable size for the family.

8.1. Ana akusaka kola wanache wajinji? *Would you like to have more children?*

IAI *no*

EE *yes*

If YES ask:

Wosope pampepe walingwa ? _____

How many altogether?

8.2. Ana akusanonyela kuti akole wanache wachalume kapena wachakongwe?

Do you prefer boys or girls?

achalume *boys*

achakongwe *girls*

wosope wakulingana *they are equal*

8.3. Ligongo chichi yikusawa yakusosekwa kola wanache wajinji?

Why is it important to have many children?

OR

Ana chakusakolela wanache wajinji ni chichi?

Why most of the people want to have many children?

wanachewo akusakamuchisya masengo *children help with household duties*

kuti atukamusyeje kulima ni kulolela *ilango children help at the fields with animals*

kuti tangamuchisye patinjikalambalapo

children will support me when I am old

wanache wane akusawa mwangajembecheya *so many children die anyway*

ligongo Mlungu akupele

they are a gift from Allah / God

makolo getu gakusasakaga kuti tukole wanache wajinji

our parents want many children

wankwangu akusasosaga wanache wajinji

my husband wants many children

Magongo gani --- *else, specify---*

8.4. Ana pana ntela wokusakamulisya masengo kungani ja uwelesiji kuti awelecheje mnope kapena apumulile kuwelekako? *Do you use any kind of contraception?*

EE *yes*

IAI *no*

8.5. **If 8.4. YES ask:**

Wachikuda kapena wachisungu? *Is it African or modern method?*

wachikuda *African*

wachisungu *modern*

Ana akusasaka ntela wakwe wa chikuda kapena wachisungu?

Would you prefer African or modern method?

chikuda *African*

wachisungu *modern*

8.6. **If 8.4 NO ask:**

Ana akusasakaga matala gane gakulechela kuweleka kapena kulela?

Would you like to use some method?

EE *yes*

IAI *no*

Nambi chikusalekasya chichi kuti apocheleje ntela wakulela?

What prevents you from using contraception?

9) Thank you!

Sikomo kwejinji mwanja mama yakutenda yetu yalelo yimalire pelepa. Kwalipana yakuusya yakumulana niyosope ituwusisye apanoyi?

Thank the interviewee for her time and ask if she has any questions.

Appendix 4: summary of factors that were analyzed as independent variables

Social network

- dominating decision maker
- most important decision maker
- person who pays for treatment
- has responded borrowed money for treatment of her child
- who is asked for advice and advisor if first treatment fails
- respondent is uncertain about treatment, whose consent is sought & possibility to oppose this person
- person who is informed when child is seriously ill
- whom does the respondent consult for treatment & number of people consulted

Treatment of illnesses

general questions

- first reaction and medication when child falls ill
- type of treatment if home medication fails
- whose agreement is needed for treatment outside home
- who decides about treatment if illness lasts for longer time
- mothers reaction if child needs help urgently
- mother's opinion about incurable illnesses & illnesses that require modern or traditional medicine

illness specific questions

- a) first treatment
 - type of first treatment
 - number of local treatment options
 - number of biomedically correct treatment options
- b) second treatment
 - type of second treatment
 - number of local treatment options
 - number of biomedically correct treatment options
- c) type of prevention and causation
- d) first and second treatment for
 - diarrhea
 - malaria
 - fever
 - cough

Contextual variables

family characteristic

- a) respondent (= mother)
 - age
 - village of residence
 - she lives in her "own" village
 - marital status
 - poly- / monogamous union
 - number of husbands & fathers
 - contraception: respondent would like to use or is using (any kind)

b) children

- birth order
- total number of children
- all children live with mother

c) husband

- age
- place of residence
- total number of wives
- number of wives before and after the present one

d) uncle

- place of residence
- age

e) extended family

- head of the extended family
- age & place of residence
- head is female, not appropriate male

economic status of family members

- a) respondent
 - provider for economic needs
 - condition, materials and - ownership of house
 - amenities and possessions
- b) husband, uncle and possible other head of the family
 - ownership of valuable items
 - economic status of male heads
 - richest of the relatives
- c) aggregated economic scale

education of

- a) respondent
 - she has attended school
 - number of years at school
 - she reads / writes
- b) husband, uncle and possible other head of the family
 - s(he) has attended school
 - number of years at school
 - s(he) reads / writes

general

- interviewer