MEDICAL PLURALISM AND UTILIZATION OF MATERNITY HEALTH CARE SERVICES BY MUSLIM WOMEN IN MOMBASA, KENYA

By

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This document is dedicated to my parents.

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ACRONYMS

AIDS	Acquired immuno-deficiency syndrome
HIV	Human immunodeficiency virus
MCH	Maternal child health
MOH	Ministry of Health
MTCT	Mother-to-child transmission
NGO	Non-government organization
TBA	Traditional birth attendant
STI	Sexual transmitted infections
UNAIDS	United Nations AIDS organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organization

GLOSSARY

Swahili	Culture of the people of East African coast from Mogadishu (Somalia) to Southern Mozambique.
Mswahili	The person (plural – Waswahili or the people)
Kiswahili	Language used by the Waswahili
Kenya shilling (Ksh.)	Money used in Kenya – the exchange rate was Ksh. 75-80 to the dollar. Minimal wage ranged between Ksh. 8,000 to 20, 000.
Kanga/ Leso	A rectangular piece of colorful cotton cloth, approximately three by one feet with multi-purpose use, worn in pairs.

Abstract of Dissertation Presented to the Graduate School
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MEDICAL PLURALISM AND UTILIZATION OF MATERNITY
HEALTH CARE SERVICES BY MUSLIM WOMEN IN MOMBASA, KENYA

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This is a study of health-seeking behavior of pregnant Muslim women in Mombasa, Kenya. Early initiation and attendance of prenatal care has been shown to result in positive pregnancy outcomes. In addition, birth delivery assistance from a trained and well-equipped provider is necessary to reduce maternal morbidity and mortality.

Kenya, among other countries in Africa has a high maternal mortality rate. The major direct causes of mortality are hemorrhage, sepsis and hypertensive diseases of pregnancy. Malaria, anemia, tuberculosis and HIV/AIDS as well weaken the immune system and add to the toll of death during childbirth. Due to the HIV/AIDS epidemic, Mombasa has an increasing rate of mother-to-child transmission (MTCT). In this study, women's knowledge of MTCT is assessed.

To address these above issues, Kenya developed a Safe Motherhood Initiative in 1987. This initiative was to identify poverty reduction strategies among women, improve

reproductive health and assure child survival. The research reported here adds to the studies of the Safe Motherhood Initiative from the women's perspective. I believe that many of the findings of the research reported here can apply to urban areas across Kenya and, indeed elsewhere in urban Africa where medical pluralism is the norm.

I investigated the available maternal health care services and how, when and why women used or did not use them. I used participant observation followed by and a questionnaire to collect data from 265 Muslim women. Logistic regression techniques are used to estimate models of prenatal care use and choice of a birthing facility. Women were interviewed during the postpartum period, while in the hospital, at home and while attending the sixth week check-up. The results demonstrate the complexities of women's lives and the difficulties they face in accessing maternity health care. Their reasons for not getting the care they need include cost, distance, lack of competence of health care providers, and frequent shortages of essential equipment and supplies to provide basic essential obstetrical care. In addition, their beliefs, knowledge and attitudes about the efficacy of health care services and the curability of their condition affect their health-seeking behavior.

CHAPTER 1
LITERATURE REVIEW

Introduction

This is a study of health-seeking behavior of pregnant Muslim women in Mombasa, Kenya. Mombasa has an increasing rate of mother-to-child HIV transmission and a high maternal morbidity and mortality. HIV-positive women transmit the virus to their infants during pregnancy, during childbirth and while breastfeeding. HIV positive children fail to thrive and have delayed motor development, with deceleration in mental health. These children have a poor prognosis. Their health deteriorates at a faster rate due to AIDS, and mortality is hardly past five years of age (Butlerys and Lepage 1998). In 2001 Kenya had 220,000 cases of pediatric HIV infection from mother-to-child transmission (UNAIDS/WHO Epidemiological Fact Sheets 2002).

Kenya has a high maternal mortality. In 2001 it was estimated at 590 deaths per 100,000 births, and this is likely to be an underestimate since many maternal deaths are not reported. The director of medical services in Kenya estimates that from 3300 to 6000 Kenyan women die each year of pregnancy related causes (Ministry of Health 1997). The major direct causes of mortality are hemorrhage, sepsis, and hypertensive diseases of pregnancy. Malaria, anemia, tuberculosis and HIV/AIDS weaken the immune system and add to the toll of death during childbirth. To address these problems, Kenya developed a Safe Motherhood Initiative in 1987. This initiative was to identify poverty reduction strategies among women, improve reproductive health and assure child survival. The Safe Motherhood Initiative was followed by a National Reproductive Health Strategy

covering the period 1997-2010. The strategy required all districts and provinces to as
the causes of maternal and perinatal morbidity and mortality (Republic of Kenya 2001). Pilot studies have been conducted across Kenya to assess the results of these safe motherhood programs (Trangsrud and Thairu 1998). Findings reported here adds to these studies of the Safe Motherhood Initiative. I believe that many of the findings of the research reported here apply to urban areas across Kenya and, indeed, elsewhere in urban Africa where medical pluralism is the norm.

This study was initially set to interview HIV-positive women, however when I arrived in Mombasa, I was informed by clinicians that this would be difficult since most of the women are not tested, and if tested women do not return for results. Previous studies explain that women do not return for results due to fear of knowledge of an HIV positive status. Another obstacle was women who knew that they were HIV-positive did not want to reveal their status due to stigma. Although I questioned if a respondent was tested for HIV, I did not inquire whether one is positive or negative. Knowledge of testing and counseling for HIV is an important component in maternity health care assessment. I re-formulated the hypotheses as follows:

1. Muslim women who have strong Muslim beliefs will go to Islamic institutions and healers compared to women without similar beliefs;
2. Women who have knowledge about MTCT will seek more adequate maternity health care than will women without similar knowledge;
3. Women who develop pregnancy related illnesses or complications will seek Islamic healers compared to women without complications.

To explore these above issues, I investigated the available maternal health care services and how, when and why women used or did not use them. I used participant observation followed by a questionnaire to collect data from 265 Muslim women in Mombasa, Kenya. Prenatal care services and parturition in a well-run biomedical facility would improve maternal and child health. However, although most women do not deliver at home, the facilities that they do use do not provide the kind of care that can reduce mother-to-child transmission of HIV.

The results demonstrate the complexities of women's lives and the difficulties they face in accessing maternity health care. In relation to the hypotheses, women who had economic means independent of their spouses or family had better access to health care than women who did not irrespective of religious beliefs or educational status. Women whose economic status was dependent on spouses, partners, and family members had varied reasons for lack of or poor access to adequate maternity health care. Their reasons for not getting the care they need include cost, distance, lack of competence of health care providers, frequent shortages of essential equipment and supplies to provide basic essential obstetrical care. In addition, their beliefs, knowledge and attitudes about the efficacy of health care services and the curability of their condition affect their help-seeking behavior.

In this chapter, I explain the different theoretical models used by medical anthropologists in analyzing non-Western health care decision-making processes and behavior. Kleinman's (1978, 1980) explanatory model is appropriate for this study, it incorporates the individual's cultural response to illness and treatment. Furthermore, the model refers to the patient's and family's conceptions of the nature of a particular illness

episode, its causes and effects, expected and /or desired treatment and apprehensions about the outcome .

In this chapter, I also explain the three routes through which a mother can transmit HIV to her infant, and the preventive and curative methods to decrease or avoid transmission. I also discuss the importance of prenatal care to illustrate what women should be receiving when they get efficient care. From my personal experience as an obstetric nurse, the expectations developed in the United States about what constitutes adequate prenatal care are unrealistic for Mombasa. I present below some of the debate on the adequate number of prenatal care visits. I also review the literature on the use of prenatal care services by women with and without HIV infection and compare it with the results from Mombasa.

Chapter 2 outlines the geography and history of Mombasa and offers a brief overview of Muslim women's life there. Mombasa has 750 years of recorded history and it is unique on the African continent. The town's cultural and ethnic mixture comprises the local Bantu with Arab, Indian, Portuguese, Chinese and British sojourners, some of whom remained in Mombasa to this day. "If a society or culture does not develop procedures for healing and curing, it does not exist," says Rush (1996:138) and indeed, Mombasa's fluid and plural medical system, developed from its turbulent history, as I explain in Chapter 3.

Chapter 3 outlines the medical pluralism practiced in Mombasa. Kleinman's (1978, 1980) explanatory model divides medical pluralism into three sections: biomedicine, traditional medicine, and the lay sector. Islamic health practices are found in all three sectors. In Mombasa, biomedicine is respected by Muslims when treatment is required

for outbreaks of diseases such as typhoid. However, when the agent for an illness is suspected to be supernatural, Muslims in Mombasa seek other means of healing. In this way, they are similar to Christian Indians in Latin America (Crandon, 1986), Hindus in India (Subedi 1989) and Buddhists in Thailand (Golomb 1988, Techastraisak and Gesler 1989). The dissatisfaction of one therapeutic system to heal or cure leads users to try others until a remedy is achieved.

Chapter 4 explains the methods used in this research. I present the research design and objectives, the advantage and disadvantages of native ethnography. In addition, I illustrate the areas and methods of data collection and the sampling design.

Chapter 5 presents the major results from analysis of the 265 questionnaires. The individual respondent's questionnaires provided information on the following: demography, household characteristics, knowledge of mother-to-child HIV transmission and use of maternity health care services. Logistic regression models the use of various prenatal and natal health care options

The ethnography of pregnancy, childbirth and postpartum is presented in chapter 6. I have included women's concerns of secondary infertility and pregnancy loss and the herbal and ritual prohibitions and treatment to ensure fertility. Furthermore, I incorporate illnesses that women perceive as risks for a pregnancy and the plural methods used to treat these conditions. I finally narrate my experience of observing childbirth in a home-birthing center.

In Chapter 7, I present the summary and conclusion using cultural materialism as a theoretical tool to evaluate the different components that impede or assist women's access to maternity health care. I divide these varied factors into the format of

infrastructure (demography, occupation, and obstetrical characteristics), structure (education, domestic and political economy) and superstructure (values and beliefs). This model takes into account that there is a relationship between all of these above elements when women seek health care. The concept of reproductive health is a basic human right and any of the above factor/s can help or infringe on this right.

Theoretical Overview

Theoretical Models in Health Care Seeking Behavior

Medical anthropologists have offered five different frameworks for analyzing decision-making about health care in non-Western societies. These are the determinant, process, mental, systems and critical models. Although these models may provide "overlapping, sometimes contradictory explanations of similar phenomena," (Ryan 1995:7) no single framework appears adequate for explaining a group's health-seeking behavior.

The determinant model attempts to account for intra- and intercultural variation in health-seeking behaviors by examining the characteristics of illnesses, patients, caretakers, households, communities and health care services, as well as the individual's actions and willingness to seek care (Mechanic 1969, Colson 1971, McKinley 1973, Foster and Kemper 1973, Fabrega and Manning 1979 and Stoekle et al. 1963). Friedson (1960), Suchman (1964), Chrisman and Maretzki (1982), Igun (1979), and Young (1981) emphasize that decision making about health care is a process rather than simply a determined outcome. The process begins with awareness of an illness, followed by diagnosis, selection among alternative therapies, and evaluation of the therapy. This can lead to new choices and re-evaluation of outcomes. Nyamongo (1998) and Mbeh (2000)

found the process model to have more predictive power in assessing response to infant diarrhea and malaria respectively.

Frackenberg and Leeson (1976), Feierman (1981), and Young (1981) describe the systems model as the impact of social forces on the search for health care. This model according to Janzen (1978) requires two levels of analysis, one at the micro level (incorporating perceptions about an illness, the prevalence of the illness, and efforts to diagnose, prevent, and cure an illness) and one at the macro level (incorporating information about large scale social entities such as health institutions, economic and political systems that dictate access to health care. Janzen (1978) points out that, in most non-Western societies, the reaction to illness involves a "therapy management group" comprising the friends, family and others in the social network of the ailing individual. McKinlay (1973:275) adds that "the family, its kinship and friendship networks, influence the manner in which individuals define and act (or fail to act) upon symptoms of life crisis."

Kleinman (1978, 1980), Cominsky (1982), MacCormack (1982) and Good (1986) formulated the mental models approach to health care seeking. This model focuses on how people understand and experience their illness and that of others around them. This understanding is, of course, a function of local culture. Kleinman's (1978:86) proposes a theory using the explanatory model (EM) to describe illnesses in different sectors of the health system. For each illness, according to the EM approach, there is a set of beliefs about its etiology, onset of symptoms, pathophysiology, development, severity, and treatment, as well as about appropriate roles for those afflicted. In addition, the EM approach examines macro-level or external factors, such as the political, economic,

social, historical and environmental determinants in health care seeking behavior. Singer (1990) has criticized Kleinman's use of the EM approach and ignoring power relations between social groups and between classes. I take this critique into consideration in analyzing the data reported here. The EM approach, in theory, provides a way to make cross-cultural comparisons of health-seeking behavior. Unfortunately, while many scholars have done EM studies, systematic comparison for commonalities across cultures has not yet been achieved. Indeed, I offer the research reported here as a contribution to EM research, but leave for later the systematic comparison of models for seeking prenatal and perinatal care.

The critical approach in medical anthropology focuses on how "political and economic forces, including the exercise of power are used in shaping health, disease, illness experience and health care" (Singer and Baer 1995:5). This model is "holistic, historical and immediately concerned with on-the-ground features of social life, social relations and social knowledge, as well as with culturally constituted systems of meaning" (ibid: 81; see also Morgan 1987, Singer 1986, 1990, Singer et al. 1992). The critical model focuses explicitly on macro-level forces to explain behavior rather than on the individual, though the ethnographic data on which critical analyses are based are often individual-level narratives (Scheper-Hughes 1992).

Mother-to-child-transmission (MTCT) of HIV

MTCT of HIV-1 can occur before, during or after birth. The contribution of each of these routes has not been well identified, but it is estimated that two- thirds of potential exposure occurs in utero and during birth while one-third occurs post-natally. Understanding the risk of infection from these different routes has been important in public health for the development of appropriate interventions. According to Newell

(1998), HIV can infect the placenta at all stages of pregnancy, and infected placental cells may be passed to the fetus during childbirth. She concurs that when the amniotic sac is intact, transmission may occur from the placenta to the fetus in fetoplacental circulation. Studies to support intrauterine transmission have detected the "virus from fetal material as early as 12 weeks' gestation, the intrauterine onset of symptomatic HIV disease, and the identification of HIV in amniotic fluid" (Newell 1998:831). Infants have tested HIV positive within days of birth, with some infections progressing rapidly, suggesting intrauterine transmission (ibid).

HIV transmission during labor and delivery occurs in two ways. One is from direct contact of the infant with infectious maternal blood and genital secretions during passage through the birth canal. The other is through ascending infections from the vagina or cervix to the fetal membranes and amniotic fluid through absorption in the infant's digestive tract. In either case, cesarean section is appropriate for prevention, with immediate suctioning of oral and nasal secretions of the infant. The presence of HIV has been identified in the birth canal, with higher levels in pregnant than in non-pregnant women. Trials to assess reduction during delivery by antiseptic cleansing of the birth canal have been conducted in Malawi (Biggar et al.1996), but results showed no significant impact on HIV transmission rates, except when membranes were ruptured for more than four hours before delivery. Studies also suggest a reduction in the rate of MTCT with the use of zidovudine (AZT) in pregnancy and at the time of delivery, though the drug has little effect on the serostatus of the mother. AZT during pregnancy and delivery has become the standard treatment in developed countries, producing a transmission rate of fewer than 8% in regimen-compliant women. This is still not an

option in most of sub-Saharan Africa because of the cost of AZT and other antiretrovirals. A single dose of nevirapine, however, given to the mother before she goes into labor, and a single dose given to the baby within 72 hours of birth, has proven a cost effective treatment to reduce MTCT in developing countries (Stringer et al. 2000), with trials in Uganda (Guay et al. 1999) and in Zambia (Marseille et al. 1998). Other studies done to improve care during delivery (Taha et al. 1997 and Gaillard et al. 2000) have examined possible interventions to reduce MTCT by antiseptic cleansing of the birth canal before parturition.

In the postnatal period, breastfeeding has been associated with increased MTCT. The rates are higher in women who are newly infected compared to women with stable infection. Present studies are not clear concerning the possibility of increased HIV in colostrum. Mixed feeding practices also increases risk of infection, due to damage of the infant's intestinal tract from the early introduction of other foods. Some infants who initially test negative at birth become infected at 3-6 months, and in the developed countries, women on postnatal HIV therapy are discouraged from breastfeeding (UNAIDS 1998).

Most studies done in Kenya have concentrated on voluntary counseling and testing for HIV (Cartoux et al. 1996, Vollmer et al. 1999 and Sweat et al. 2000) specifically to evaluate the acceptability and cost of testing.

Prenatal care services

The proper use of prenatal care services results in positive pregnancy outcomes by reducing the risk of maternal and infant morbidity and mortality. Health care centers offering prenatal care provide an informal risk assessment based on clinical judgment to

guide the providers appropriate monitoring and possible interventions during the pregnancy (Aday and Andersen (1975).

Various factors ((previous medical and obstetrical history, screening laboratory results, and intrapartum events that predict perinatal morbidity and mortality) are assigned risk scores which, together, produce a probability of premature or low-birth weight delivery. Prenatal risk assessment also assesses the probability of adverse perinatal outcomes (Murata et al. 1992).

Prenatal evaluation continues with urine analysis and blood tests for rubella, hepatitis B, gonorrhea, chlamydia, genital herpes simplex and HIV. Where available, screening for congenital fetal disorders, like Down's syndrome, neural tube defects and Rhesus isoimmunization are performed (Oldenetti et al 1996). Screening for anemia is important in Mombassa because of the high prevalence of malaria and sickle cell anemia. The diagnosis of common pregnancy complications, such as intrauterine growth restriction, post-term pregnancies, pregnancy induced hypertension and gestational diabetes, is necessary to prevent adverse outcomes. Reassessment of the mother's well-being continues throughout pregnancy along with education on the physical and emotional changes associated with pregnancy. Women who follow through with prenatal care also get information about childbirth, breastfeeding, and infant care classes. Despite the measurable benefits of prenatal care, women in developing countries do not adequately use the services (Berer 1999).

What is adequate utilization of prenatal care?

How much prenatal care is enough? With all the research, this is still a controversial question. In Switzerland and Singapore (Sen et al. 1991), just three prenatal care visits are considered adequate, while in the United States, 9-12 visits are

recommended (Kessner 1973, Kotelchuk 1994, Standards for American College of Obstetricians and Gynecologists 1985). For over three decades, the Kessner Index (Kessner 1973) has prescribed nine prenatal care visits for a normal pregnancy. Kotelchuk (1994) Alexander and Cornely (1987) argue that the number of visits is less important than the content and timing of visits. Adding to the confusion, Mahan (1996) asserts that indices for judging the adequacy of prenatal care are not useful at all. "Quality of prenatal care," he says "needs to be judged at the local level. Outcomes of life or death or handicap are the ultimate measures of quality care" (1996:418).

The World Health Organization advocates, that maternity care should be a "multidisciplinary, holistic, demedicalized, yet evidence-based approach that involves women, and their families in decisions about their care" (Chalmers et al. 2001). Fortunately, empirical evidence is available on this problem. Munjanja et al. (1996) compared women in Harare, Zimbabwe, who had 12-14 visits with women who had six visits. Among the 16,000 participants in this randomized field study, there were no significant differences in pregnancy outcomes, at the aggregate level, for women in the two experimental conditions. Based on this finding, I consider six visits as adequate prenatal care.

Utilization and access of prenatal care services

In 1998, a joint UNAIDS/UNICEF/WHO working group announced an initiative to reduce perinatal transmission of HIV. The intervention was formulated to increase infant survival, based on a package of six components:

- Early access to adequate prenatal care,
- Voluntary and confidential counseling and HIV testing for women and their partners,

- A short course of perinatal antiretroviral treatment for HIV positive women before delivery and the newborn at birth,
- Improved care during delivery,
- Counseling and support for safe infant feeding practices (Berer M 1999:872).

Many studies show that cultural, structural, and infrastructural barriers to prenatal care all play a role in determining the rate of adverse outcomes of pregnancy. (See Mabina et al. 1997, Lang and Elkin 1997, Goodburn et al. 1995, Campbell and Kelly 1995, Wall 1998, McCray 1982 and see Paredes et al. 2005, Romoren et al. 2005, Manadhar et al. 2004, Nigenda et al. 2003, for recent examples. See Medley et al. 2004 for a review.)

The study I report here focuses on Muslim women's access to prenatal care and their actual health-seeking behaviors in Mombasa. Pregnant women cannot get HIV testing and counseling unless they go to a prenatal care health center that provides these services. A positive HIV test is the entrance for perinatal intervention to decrease MTCT. The challenge that health care providers and researchers face has been to understand women's rationale for not using preventative services even when they are aware of the benefits.

It is not necessarily the cost of services that prevents women from fully using prenatal services, but living a "crisis existence and dealing with issues of financial difficulties" (McKinlay and McKinlay 1972:377; and see Celik and Hotchkiss 2000, Jelley and Madeley 1983, McKinlay and McKinlay 1972, Sargent and Rawlings 1991, and Wilkinson et al. 2001). For example, user fees for preventative primary health care were removed in South Africa in 1994 but this did not improve prenatal care utilization

(Wilkinson et al. 2001). By contrast, low-income HIV- positive African-American women on Medicaid in New York improved their use of prenatal care (with concomitant improvement in birth outcomes), once a program was implemented to enhance the women's understanding of health-seeking behaviors (Turner et al. 2000).

Studies of African-American, Mexican-American and Puerto-Rican women in the United States indicate an association of low socioeconomic status (SES) and marginalization with low-birth weights, premature deliveries and adverse pregnancy outcomes (Echavarria and Parker 2001, Gardner et al. 1996, Lia-Hoagberg et al. 1990, Petitti et al. 1990, Turner et al. 2000). In Britain, Petrou and colleagues (2001) infer that women of Pakistani and Indian origin made fewer prenatal care visits than attendance made by white British women, possibly due to cultural and religious beliefs. Magadi et al. (2000) in their study of frequency and timing of prenatal care in Kenya state that women's attendance was inconsistent, suggesting further research of traditional beliefs, religious and cultural practices.

Other demographic factors included in most of the above studies included age, parity, obstetrical histories and desire for the pregnancy. Teenagers and uneducated women under-utilize prenatal care services (McCaw-Binns et al. 1995). There is also documentation that prior adverse obstetric experience is a barrier to seeking early care (Ivanov and Flynn 1999).

Lack of support from family and friends, particularly to assist with childcare or transportation, is a structural barrier to the use of prenatal care (Winston and Oths 2000). In some societies, women have to ask for permission from their partner, their in-laws or their co-wife before leaving the household. The permission giver must therefore be an

advocate of biomedical health care. In Mombasa, the saying that "pregnancy is not an illness" implies that women should not use the need for prenatal care as an excuse for not fulfilling their familial and social obligations during pregnancy. The saying is clearly a cultural artifact, but it belies a structural barrier, because so much of daily life (cooking, cleaning, and taking care of infants, taking care of sick and frail relatives and friends) depends on women's remaining active during pregnancy.

In terms of infrastructure, the sheer presence of low-cost, easy-to-reach clinics can have an impact on the rate of use of prenatal care. Women often say that they are put off by the long lines at clinics, inconsistent health care providers, the lack of female staff, and a general lack of confidence with the health care system (Barnes-Josiah et al. 1996, Handler et al. 1996, Ivanov and Flynn 1999, Mayer 1997, Petrou et al. 2001) Despite the importance of these factors, all the evaluation studies just cited agree that strong rapport between the pregnant woman and her health care provider increases women's health attendance.

HIV positive women and the utilization of health care

Good communication between health care providers and pregnant women with HIV is all the more important because these women deal with the challenges of taking care of themselves, their families and their children in an environment of fear, guilt, "stigma, uncertainty, and limited access to information and health care" (Bunting and Seaton 1996:563). Lack of privacy is a major satisfaction issue in health care centers in Mombasa due to overcrowding. In order to create privacy, counseling rooms for HIV positive women have been made available in a few facilities through Horizons Project of the Population Council – a USAID venture (USAID 2001). Unfortunately, unlike other pregnant women, HIV positive pregnant women have an added concern while attending

prenatal care clinics – the fear of disclosure of their HIV status to a spouse or boyfriend, family member, neighbor or co-worker (Sobo 1995).

Walter et al. (2001) found that, though new mothers were not knowledgeable about perinatal HIV transmission and did not trust health care institutions; this did not deter some of them from seeking health care. Oldenetti et al. (1996) found that HIV positive women believed that every woman should have the option of being tested but that HIV testing should not be done unless counseling and treatment are available. Sobo (1995) found that women trust clinicians who show empathy and a non-judgmental attitude and who do not pressure women to disclose their HIV status. Given this, Sobo recommends straightforward communication to reduce misunderstanding.

Ingram and Hutchinson (1998) reported that HIV positive women felt oppressed and discriminated against by society and by the health care profession. These women, they say, use various coping mechanisms in order to lead "normal" lives – alternately concealing their HIV status from strangers or looking for sympathizers in society. In a follow-up study, Ingram and Hutchinson (1999) say that some women develop an attitude of "defensive mothering" to protect their children against stigma. These mothers did not hide their HIV status from friends and family and took extra precautions in their health behavior and practices. The near-universal directive to reproduce provides a woman with a different status during pregnancy. "Babies represent sources of love, acceptance, and a legacy for the future," say Ingram and Hutchinson (ibid: 243) "even for a woman with no sense of future for herself." Other studies show that guilt and the fear of dying and leaving children behind can become an emotion that dominates women's reproductive decisions (Sowell and Messner 1997, Williams 1990).

Much of the researches on cultural and social barriers to prenatal care for HIV-positive women have been done in the United States. The MTCT problem is greatest, however, in developing countries. The research I report here contributes to the research called for by Reeves et al. (1999), among others, on HIV positive women's knowledge about MTCT, and the barriers that prevent them from using available prenatal and perinatal care.

CHAPTER 2
MOMBASA – THE RESEARCH AREA

Geography

Mombasa is located off the coast of East Africa. As Kenya's second city, it is the main seaport and the capital of the coast province. Kenya has seven provinces; the coastal province is one of them. The island of Mombasa adjoins the coastal hinterland; it is symmetrically oval, three miles long and five-and-one-half square miles in area, lying on a northwest-southeast axis (Stren 1978). The connection of the island to the mainland is the Nyali bridge in the north, the Makupa causeway to the west, and a daily ferry service in the south. The whole coastal region has a tropical climate with northeast and southeast having monsoon winds. The harbor has deep waters providing excellent channels for anchorage and access for large cargo ships, thus providing access for visitors from around the world (Ntarangwi 2003).

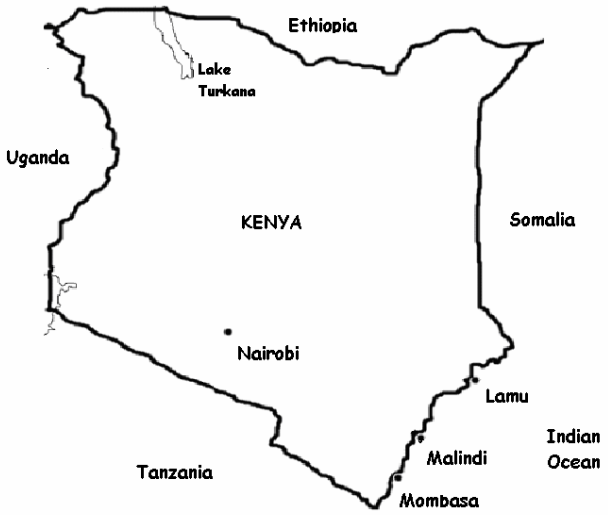

Figure 2-1. Map of Kenya – situating Mombasa

History: The Visitors and Administrators

Strobel (1979:22) explains that "in the 750 years of its recorded history prior to colonial rule, Mombasa absorbed one wave of migrants after another, each contributing to its culture". Mombasa became culturally diverse due to traders from the Indian subcontinent, Ceylon, China, and north and central Africa, and administrators from Arabia, Portugal, and lastly Britain. These latter groups have left a lasting impression on the society's politics, economy and culture.

Mombasa was an urban coastal settlement according to the geographers, al-Idrisi and Ibn Batuta who visited the area in the twelfth and fourteenth century. Arabs and Persians initially came to Mombasa to trade. The Arabs ruled the East African coast due to wars among the existent feudal rulers at the coast. Conversion of the local inhabitants to Islam was not an initial goal. According to Pouwels (1973) Islamization in Mombasa took two phases, with a stronger conversion emphasis after 1300. This has been reviewed extensively by Berg (1968), Davidson (1991), DeBlij (1968), Mazru'i (1995), Prins (1961) and Salim (1973). The coastal people named Mombasa, "Mvita" or "Isle of war" due to the many conflicts, instigated by the Arabs and the Portuguese, and later the Arabs and the British, and the inhabitants against the intruders.

There was a long period of unchallenged Arab domination which ended when the Portuguese arrived in Mombasa in 1498. The establishment of Portuguese power along the coast was greatly facilitated by the tension between the various coastal city-states and their Arab rulers. The period of Portuguese domination, lasted from 1500-1700, a time of constant clashes with the inhabitants, with assistance by the Arabs. The Portuguese had a reputation of greed, corruption and dishonesty (Kirkman 1964, Salim 1973). Dissatisfaction led to a number of rebellions and revolts with the burning down of

Mombasa on two different occasions. Other than economic interests, the Portuguese brought Augustinian missionaries to convert the inhabitants but they met with little success (Freeman-Greenville 1980: xxvii). The Portuguese built forts and garrisons along the coast in order to control this area of the Indian Ocean. The Portuguese culture and language made a minor impact on the local Swahili culture (Abdulaziz 1995:144). However, they introduced crops such as, maize cassava, cashew trees, avocado, guava and tobacco (Salim 1973:4). The Portuguese withdrew to Mozambique after numerous rebellions and riots (Kirkman 1964).

Mazru'i (1995:4) explains that there "was a power vacuum in East Africa during the 18th century" and the early 19th century after the removal of the Portuguese. From 1698, the Yarubi dynasty in Oman placed the Mazrui family as governors of Mombasa, and they ruled for 139 years. By 1812, the occupation of the Sultan of Oman was more evident with the presence of a powerful naval and military force in the Indian Ocean, incorporating the coast of East Africa as part of the Omani kingdom. Abdulaziz (1995:145) asserts that this was the beginning of a "new era of political, cultural and economic change" on the East African coast. Other immigrants were brought from other countries, such as Hadhramut, Baluchi, and India to act as laborers, officials and soldiers. The local culture and life-style became integrated with that of these immigrants in language, dress and clothing, architecture and cuisine. The diversity was solidified through inter-marriage with the local inhabitants. This was to become the Swahili culture and the people who adopted the language, and customs became the Waswahili. Kiswahili, the language has a Bantu structure; however Arabic is evident in 40% of its vocabulary,

and there are also a few Portuguese and Indian words. The word “Swahili” in Arabic means “coast” and Waswahili means people of the coast.

The Arab domination of the East African coast coincided with the ivory and slave trades Mombasa was a major slave receiving port, with some slaves remaining as domestic and agricultural laborers (Strobel 1979:30). The effort to end the slave trade on the Indian Ocean was one of the reasons that the British entered Mombasa. Although the British abolitionists had humanitarian reasons to stop slavery, they also had political and economic motives (Mazrui and Shariff 1994:31). British colonial rule began in 1895, ending almost two hundred years of Arab domination. The British took administrative responsibility from the Imperial British East African Company, and made East Africa its protectorate with Mombasa as its capital. This changed in 1902 when the capital was shifted to Nairobi. Roads, railways, and other governing infrastructure were built to increase security and to improve the political and economic advantage of the British administrators. These improvements not only altered Mombasa’s economy, but, as the Mombasa’s importance as a port grew, it also brought an influx of immigrants from upcountry (Ntarangwi 2003: 34). These new immigrants, whose ethnicities are Kikuyu, Luo, Luhya and others, were different from the coastal people in culture, religion and language. These immigrants were perceived by the established society in Mombasa to be aggressive, and “uncultured” and there was initial resistance in accepting them into Mombasa’s society (Foeken et al. 2000; Strobel 1979). Some of the so-called new immigrants have intermarried and assimilated into the Swahili culture, including converting to Islam, with their offspring becoming Swahili.

The Coastal People – Waswahili

Many scholars have tried to determine the origin of the Swahili culture and its people (Berg (1968), Chami (2002), Mazrui and Shariff (1994), Nurse and Spear (1985), Salim (1973), Strobel (1979), Swartz (1991) and Willis (1993)). The prevailing theory focuses on the fact that the initial groups of people in Mombasa called themselves the "twelve nations" (*ithnashara taifa*). These twelve nations are divided into two groups, one group of three (*miji tatu*), comprising the WaKilindini, WaTangana and WaChangamwe, and a group of nine (*miji tisa*), comprising the WaMvita, WaJomvu, WaMtwapa, WaKilifi, WaPate, WaPaza, WaShaka, WaGunya and WaKatwa. Each group, or nation (*mataifa*), had its own political representative who governed through Arab and Portuguese rule. This system disintegrated, however, under the British.

Most of the people belonging to these groups referred to themselves by their ethnicities and do not call themselves Waswahili (this occurred as well when I questioned ethnicity in this research). According to Salim (1973:1-6) these groups are what constitutes the Waswahili. He further defines the Waswahili as people of the coast with a similar language—that is, Kiswahili—and having a culture influenced greatly by the Muslim faith. He finally claims that "the Swahili do not form one tribe claiming one ancestor. The Waswahili are the result of mixing and intermarrying between Africans and immigrants".

Willis (1993:12) argues that "there is no single 'definition' of the Swahili: different people, in different situations, may appropriate this ethnonym or apply it to others according to their perception of their advantage". This argument stems from assessment of the Waswahili in three areas. First, during British colonialism, for the enforcement of taxation and other laws, the differentiation of "natives" and "non-natives" served as a

basis for people to define themselves to their economic or political advantage (Stren 1978:32). Secondly, after abolition of slavery, a freed slave became Swahili, by converting to Islam, thereby acquiring status as a non-slave (*muungwana*). Thirdly, after Kenya's independence, to be accepted into the new political arena as a *mwananchi* (a term reserved for an indigenous African), people who had claimed Arab or Persian ancestry now had to disassociate themselves from being anything other than African.

Another group of people in Mombasa are the Mijikenda, comprising nine Bantu ethnicities; the major ones are the Digo (almost all Muslims) and the Giriama. The Mijikenda have also intermarried with the Arabs and Waswahili, some calling themselves Waswahili, although the majorities have kept their ethnic identities. Some of the Mijikenda were also added to this study because of the sharing of culture, particularly in healing.

How has the history influenced society?: Among these ethnic groups in Mombasa, some cultural practices are shared while others are not. For example, healing for high blood pressure (*mwajuu*) in pregnancy is done by the Mijikenda, but Arab women use the treatment.

During my fieldwork, I observed and listened to women as they complained about demands on their time that kept them from taking care of things like preventative health care. Some of these demands include visiting friends, neighbors and relatives; attending ritual events such as weddings, circumcisions, births, and funerals; and religious studies. While these activities take time, they also provide a network of emotional and practical support, "access to jobs, goods and information" and "insurance against economic and personal calamities" (Holmes-Eber 2003:9-10).

What Occupies Women's Time in Mombasa? – Society and Culture

Visiting friends and relatives: Visits to friends, neighbors or family are made by women mostly in the late afternoons, but can occur at any time during the day. These visits are done after women have finished their other duties of cooking, cleaning and childcare, or for those who work in the formal economy, after work. Fitting in a hospital appointment for preventative care becomes difficult for some women who have to plan for visits. The visits are informal without previous announcement and can be a quick "just checking to see how you are" (*nimekuja kukujulia hali*) or a full day (*kushinda*) depending on the purpose of the visit. Visits are considered social, cultural and a religious obligation, particularly when visiting the sick. Depending on the duration of the visit, drinks such as tea, coffee or soda may be served. On these visits, exchange of information, chit chat or gossip takes place from the latest fashions, births, weddings or funerals to be attended or checking on other family members. Holmes-Eber (2003) in her research of women in Tunisia analyzes visits as important survival strategies for women. In addition, she asserts that match-making and arranged marriages take place as young people visit and meet at these social gatherings. There is no specific word in Mombasa that describes the word "visit", except words that explain what the visit is about, for example "I am going to visit the sick" (*nenda kumtizama mgonjwa*) or "I am going to pay my respect to the deceased family" (*nenda kuwapa pole waliofiliwa*).

Visits are reciprocated particularly for the sick. A woman who visits others also receives visitors (*atakae watu na yeye hutakikana*) when she or a family member gets sick. A visitor will cook and clean and help with the general upkeep of the house. Furthermore, if the sick is admitted, the visits continue at the hospital. Hospital administrators and clinicians (especially those from up-country) voiced concern and

frustration due to these visits, because of the amount of people that come to see or stay with the patient. Hospital rules that are strict and impose special times and number of people by a patients bedside are criticized, at times creating conflict between hospital personnel, relatives or friends. The hospital administrators, understanding the culture, allow one relative to stay with a patient at all times, and leave this person to be the liaison to the other relatives or friends not allowed in. The advantage to clinicians is having a family member to assist in caring for the sick, especially when there is shortage of staff. The disadvantage however, is the lack of privacy for other patients and taking time to explain procedures to the patient and relative. Information about the patient's condition and interaction with hospital personnel is relayed to other visitors. Even an infectious disease does not deter a family member from staying with the sick. Desertion of a sick family member is considered inhumane, leading to other community members criticizing, scolding or ostracizing with comments such as, "how could you neglect your sick?" (*vipi mumemtupa mgonjwa wenu*?). These comments are also made if a relative does not take of a woman who has given birth. Having a sick family member obligates a woman visiting others, or being involved in social activities. She is expected to take time c work and stay home to take care of the sick. Other relatives take turns and participate in the duties of caring. The help from other family members include when and how to seek for health care providers.

Grandparents or older family members not living in the same household, as well have to be visited and greeted whether daily or at least weekly, even when they live with other family members who take care of them. Visits increase when the elderly get sick or a sick person's condition deteriorates or at the time of death.

Funerals: Before death or when a person dies, the relatives and close friends gather to pray and perform the last rites. Attending a funeral is assurance that an individual will get a decent burial at death. A woman's last rites are performed by women, and men's by men. The corpse is left in the house where she or he died, and if the individual died at the hospital, the corpse is brought to his/her home for the last rites. Following Islamic rules of the last rites, the body does not undergo post-mortem unless foul-play is suspected and authorized by the law. The burial is conducted on the same day or within twenty-four hours after death for example, a person dying in the night is buried before sunset on the following day. A corpse that cannot be buried and has to be kept overnight is left in her or his home. Relatives and friends gather in the deceased home and Quranic text or special recitations for the soul of the departed are read. At times a religious teacher (*mwalimu*) and his students may be invited to conduct these recitations during the day before or sometimes after the burial. The one who washes the corpse (*muosha maiti*) can be a family member, neighbor or friend especially for women; however for men a designated community member has this responsibility. A large ba (in modern houses) is kept under a special bed without a mattress (*kitanda cha mwak* used just for washing the corpse. In homes that still have beaten earth or mud flooring, a hole is dug underneath the bed where the water drains. Pregnant women are excused from participating from performing funeral rites.

During this research, there was controversy about the performance of the last rites in relation to people who die due to infectious diseases, such as AIDS. The community was divided, with one group agreeing to adopt the recommendations of HIV/AIDS activists and health care providers who wanted to implement the use of gloves and special

training to be given to the washers in how to handle infected body fluids. Those who opposed such interventions argued that such practices would expose the family to the stigma that their family member died of AIDS, and also dishonor the dead (*kutuaibishia maiti*). It was decided that all bodies should be handled the same way whether the individual died of an infectious disease or not. Wearing of gloves and careful handling of body fluids is now widely adopted, but not by all.

Close relatives and friends spend three days after the burial at the deceased home. Money for food is collected from all the attendants and the mourners are fed. On the third or/and seventh day a gathering that includes neighbors and some community members takes place to pray for the soul of the deceased (*khitma*) and a big lunch is done to feed them. This practice is now discouraged as non-orthodox Islam by the religious leaders, who argue of its significance, especially since at times it places a financial burden on the mourners. Despite these protests, some people still continue with the practice.

Weddings: Traditionally marriages were arranged between families, and some do since a marriage involves the couple, both sides of the family and their relatives. Endogamous marriages are encouraged, following the Arab intermarriage system, with parallel cousins being preferred. These are done to "reinforce kin ties, keep wealth in the family and increase parental control and protection of daughters" (Holmes-Eber 2003:50). Women's education and occupation has increased exogamous unions and getting more and more societal approval.

Wedding preparations can start months before the actual exchange of nuptials. The arrangements are done by the relatives with each member volunteering to organize one of the many festivities that fit into three to seven day. The men may have only one or two

days of organizing, which include the legal and religious aspect of the wedding. The size of the wedding depends on the wealth of the extended kin. The women involved undergo beautifying rituals such as removal of all body hair (except the head) through “waxing” or “threading”, plus decorative staining of the hands and feet with henna. These get together parties might be held at either the bride or groom’s parent’s home or at a family member’s house.

Most of the women feel obligated to participate, as explained by one, “if you do not get involved, then nobody will come when it is your time” (*nisipokwenda, halafu hakuna atakaekuja nikiwa na langu*). What used to be a neighborhood and community affair for most areas, wedding practices have now changed, with families providing special invitation cards to minimize the expense of weddings. Despite this change, many families undergo financial hardship due to these elaborate arrangements. Sophisticated clothes and expensive jewelry mostly gold are at times bought or ordered from Europe or the Middle East. The more grand a function, the more status a family receives from the community. I met women I had interviewed who had complained about not having money to pay for health care, however they were adorned with very expensive jewels. When I questioned the attire, one protested that “I do not want to embarrass myself” (*sitaki kujiaibisha*). A woman, who openly displays her inability to dress well or adorn herself with the latest fashion and jewels, makes a public statement of being poor (*umaskini*), thus shaming her husband and family. Salim (1973), Strobel (1979) and Swartz (1991) describe further the details and responsibilities of the sexes, and the daily festivities for each day in a typical wedding. Ntaragwi (2003) moreover illustrates the types of music for each occasion.

Some women prioritize their time differently, and are very selective of which activities or visits to attend. These are mostly professional women who are busy and find it hard to keep up with the day to day family and social activities. Another group of women are those who attend religious classes (*darsas*). These women excuse themselves from non-religious related activities in the community. These *darsas* involve a lot of time for the organizers and the participants. They take place mostly in the evenings, about three times a week. I attended one of these meetings, just as I had attended weddings, funerals, visited a relative's son after a circumcision and numerous visits to sick friends and relatives. At the darsa, I was invited to talk about my research, and discuss my evaluation of women's health issues in Mombasa.

CHAPTER 3
MEDICAL PLURALISM IN MOMBASA

Introduction

Fabrega (1997: 12) has defined medical pluralism as a theoretical framework to explain the differences between the dichotomies of disease/sickness and illness/healing. Within medical anthropology, disease/sickness explains the biological or psychological processes, diagnosed and treated within a Western biomedical framework. Illness/healing on the other hand explain an individual's and his societal psychosocial interpretation and management of sickness, (Fabrega 1997, Kleinman 1978, Waldram 2000, Young 1981). Waldram (2000: 605) further argues that, "every medical system is a cultural system and is engaged in both healing and curing". The practice of medical pluralism is universal with the incorporation of alternative or complementary therapy, which may include homeopathy, herbals, natural healing and holistic therapy. In non-Western societies, the use of traditional medicine and some of the above practices are incorporated with methods to include indigenous and religious healing rituals.

The word for health in Kiswahili is *afya* which is a holistic concept that goes beyond that set by the WHO to include wholeness, safety and strength. "The healing processes for ill health include attention to social relationships, emotions and religious spirituality and conformity with tradition" (Boerma and Bennett 2000: 261). Ndege (2001: 90) adds that being in good health not only includes the biological functions of the body, but also embraces the political and economic forces that impact the body (Janzen 1978).

Each healing practice, according to the beliefs of pluralistic health systems, is incomplete. For example, among the women I studied, biomedicine has antibiotics tl can take care of respiratory infection, but the antibiotics can not take care of the wind that might have caused the body's physical imbalance. If any given tradition is incomplete, then pluralism makes perfect sense. In Mombasa, cultural healing practices include home remedies, traditional/folk healers, herbal practitioners, Muslim and Christian spiritual healers, charlatans, drug vendors, biomedical hospitals, and public and private health centers.

Kleinman (1978: 86) asserts that illness is experienced and reacted to in three sectors: the folk/traditional, the professional and the popular. He further explains that groups have "cultural categories that they organize various types of illness and methods of treatment" (Ware et al. 1989: 24) I have incorporated Islamic medicine and healing practices within all these sectors since it is part of Mombasa's pluralistic health care system

Biomedical Health Care

Biomedical or clinical medicine in Mombasa is organized under the government's Ministry of Health (MoH), with headquarters in Nairobi (the capital of Kenya). The government runs and owns about 51 percent of the health facilities countrywide (Owino 1998). Overseers assigned from the government headquarters implement health policies, maintain quality standards of care and control all resource allocations to provincial and district health activities. Nongovernmental, private-for-profit and mission organizations run the rest of the facilities. For further details of the history of health care and the health care infrastructure in Kenya see Beck (1981), Mburu (1981), Ndege (2001) and Nyamongo (1998). In addition, Obonyo and Owino (1997), Owino (1998), and Owino et

al. (2000) have written on the financial and managerial challenges Kenya faced frc independence (and continues to face) and guidelines needed to improve deliverance of efficient health care services. Health care for all used to be free in Kenya until 1989 when cost-sharing programs were implemented after the introduction of structural adjustment programs to assist the state with economic health management (Wanyande 1993).

The main maternity hospital in Mombasa, named Lady Grigg, is located at the Coast General (Provincial) Hospital (CGH). The hospital's administrative responsibilities are handled by the Provincial Medical Officer and his or her executive team. There are two ways that women can get prenatal care: through CGH and from the health department run by the municipal council. The CGH provides prenatal care services under the preventative health care system. These services are also offered in seven department health centers in Mombasa. These centers, however, are managed and financed by the Ministry of Local Government, represented by the local Municipal Council. The complexity of this system has been summarized well by Schaefer (1981:130) who states, "often the government of the central city has no authority over other towns in the conurbation, and rival local governments may pursue uncoordinated and contradictory policies". This lack of coordination was especially evident in Mombasa for pregnant women who presented with complications and needed advanced health care. Women with complicated pregnancies are referred to CGH where there are advanced medical facilities. Communication between clinicians who examine women at the health departments and obstetricians at CGH is almost non-existent. CGH does not deal only with women with complications from Mombasa Island, but also from the adjoining districts that comprise

the coast province. This province has a population of over two million. Despite the inefficiencies at the municipal level, prenatal care services provided for women at the CGH were well-organized, with formal educational classes given or televised while women waited for services. The instruction given to women covered nutrition (for them and for their infant), childbirth, infant care, breastfeeding, and prevention of malaria, anemia and HIV. I did not observe these classes being offered at the non-government institutions.

The major private (for profit) hospitals in Mombasa are the Aga Khan, Pandya and Mombasa. These hospitals have physicians who provide care for their admitted patients and prenatal care in their offices or clinics. These hospitals are efficient and expensive, charging approximately Kenya shillings (Ksh.) 20,000 to 40,000 (about $ 250-400) for childbirth without complications, compared to the government hospital or birthing centers that charge Ksh. 3000-4000 (about $30-50). Women who use the private facilities are mostly insured, either by the National Hospital Insurance Fund (NHIF) or by private insurance. In Kenya the NHIF is mandatory for all salaried employees earning taxable income, though it reimburses only hospital care (Owino 1998).

The nongovernmental facilities include the African Medical and Research Foundation (AMREF), UNICEF and various providers from religious charity organizations. Furthermore, there are numerous for profit out-patient clinics manned by one or two health professionals that charge reduced fees for health care services. In the late 1980's, the Ministry of Health allowed health care workers such as nurses and clinical officers (physician's assistants) to engage in private practice (Obonyo and Owino 1997). This government ordinance led to the opening of numerous out-patient health

centers, pharmacies and small hospitals that serve about five to twenty in-patients, providing curative and preventative health services.

Christian- and Muslim-run not-for-profit charitable hospitals that charge minimal fees are among these varied health care facilities. My research concentrated on three of the Muslim-run establishments—the MEWA, Sayyida Fatima and Al-Farouk hospitals. These hospitals were in neighborhoods where almost all the inhabitants were Muslims. This proximity increased women's attendance when they needed maternity health care. In addition, the cost for prenatal care and childbirth was almost a third less than that charged at the other private institutions. These three hospitals had a total capacity of 80-100 in-patients. Each had a small emergency room that managed minor cases of immediate care, facilities for small surgical procedures, a pharmacy, a laboratory and an out-patient facility. Moreover, they had qualified physicians (some worked privately, some were employed by the hospital), nurses, midwives and other various hospital personnel. The majority of the staff and their clients are Muslims, though there were a few non-Muslims. The sense of familiarity that comes from receiving care from staff of similar religious beliefs and culture increased encourages some women to use these facilities. Nevertheless, I heard complaints from several women of nurses being unhelpful and "arrogant." Criticism also stems from inflexibility of hospital staff in rejecting certain cultural practices, like the release of a corpse immediately after death. Islamic practice is to bury within twenty-four hours. This becomes a problem since hospital rules (imposed by the government) require that all the right documents be files or that a post-mortem be done before a corpse is released. This tug of war between religion, culture and biomedicine affects the relationship of the local community and clinicians. Quite a few

community members asked: “What is the use of having a Muslim-run hospital if they cannot understand our needs?” The wide knowledge gap between health care providers and their patients or kin at times created tension when they dealt with each other. Some women offered these conflicts, created by the hospital administrative system, as their reason for choosing home-based birthing centers.

Birthing centers are operated by nurses, midwives, clinical officers (physician’s assistants) or, occasionally, a physician. There one or two clinicians at these centers employ a non-licensed assistant to help with management tasks. The volume of patients is low—from five to twenty parturitions a month. Prenatal care is not efficient or consistent; some of these centers have a small laboratory that can perform minor services, such as hemoglobin levels and urine tests. Women are sent to private laboratories and pharmacies for services if needed. Women who avoid hospitals because of rigidity assert that this atmosphere is preferable. On the other hand, women who need advanced medical care do not receive it at these centers, with detrimental consequences for their health. Basic biomedical equipment is used during childbirth. Instruments are sterilized; birthing beds are used with stirrups when needed. Minor surgical procedures such as episiotomies and circumcisions (of male infants) are performed. One of the major complications of childbirth is postpartum hemorrhage. Oxytocin, or ergometrine, a medication to stop bleeding, and intravenous fluids are given to women who are beginning to hemorrhage before they are rushed to a hospital that can provide advanced care.

The atmosphere in these centers is relaxed, jovial and comfortable. Women are not rushed and services such as body massages are available for a fee. Biomedicine, home remedies and traditional healing practices are combined. For instance, a woman

diagnosed with anemia is given iron pills, advised to drink a mixture of raisins and spices (*sikijabili*), and receives advice in the form of a Quranic verse that she can recite to get rid of *hassad* (evil eye).

The health care network starts from these neighborhoods maternity facilities moving up to the Lady Griggs / Provincial hospital where women are referred for complications. The private hospitals and the CGH have more sophisticated diagnostic, therapeutic and rehabilitative services. With the HIV/AIDS epidemic in Mombasa, most of these other facilities do not have the training to assist HIV-positive women or their infants in therapeutic care during pregnancy or at childbirth.

Traditional/ Folk Medicine

"Healers have for long been treated like trees on savanna farms – not formally cultivated, yet valued and used, particularly by women and children" (Chavunduka and Last 1986:259). The traditional healer (*mtabibu*) has been defined as the witch-doctor (*mganga*), diviner, medicine man, herbalist or sorcerer. In an urban area like Mombasa, biomedicine is politically the only legitimate and acceptable form of health care service, though the herbalists and diviners continue to practice publicly (Mburu 1992). Ataudo (1985: 1345) describes African traditional medicine as "the totality of all knowledge and practices, whether explicable or not, used in diagnosing, preventative or eliminating a physical, mental or social equilibrium and which rely exclusively on past experience and observations handed down from generation to generation, verbally or in writing".

Traditional healers in Mombasa are both male and female and they practice for both sexes depending on ailment. However, pregnancy related illnesses are treated by traditional birth attendants (TBAs) who have various degrees of knowledge in herbal remedies. In addition, practices such as massage therapy are done only by women

healers. Healers as well use an "extensive system of classifying illnesses according to signs and symptoms and suspected cause. Their system is dynamic and increasingly incorporates biomedical knowledge" (Boerma and Bennett (2000: 262-263). This was evident during observations and interviews with TBAs. Almost all TBAs stated that they used gloves and dettol (antiseptic solution) while assisting in childbirth. I observed them giving pain relievers such as (Panadol/Tylenol) and Chloroquin to treat malaria. In Mombasa, TBA's are sent for educational training to the provincial hospital to learn about complications in childbirth and prevention of HIV from contact with body fluids. This has been promoted and encouraged by UNICEF. The TBAs who receive such training are registered with the neighborhood chief. Mombasa Island has seven chiefs who function under the administrative structure of the Municipal Council. These chiefs have the responsibility to register births and deaths in their locations. They also keep a log of all practicing TBAs. Not all women who give birth in the neighborhoods are assisted by registered TBAs. Almost all of the TBA's stated that they did not have formal education or training, but had learned from observation. They stated that they received their training to assist in births from their mothers, grandmothers and/or other female relatives. A few TBAs stated that they had worked in hospitals as nursing assistants and had learned from observation. There were two TBAs who declared that it was a spiritual obligation, since they were "called" to healing. TBAs charge about Ksh. 2000 (about $25). They do not demand payment before they render their services, and some barter for other goods or services when financial payment is impossible. They are also flexible. They go to women's homes before a birth, and will stay to assist with the care of the mother and baby if they are not called away for another birth.

During the interviews for this study I talked with 12 women who had assisted in births, but I spent a lot of time with and directly observed two TBAs (see Chapter 4) who were conducting the most deliveries in Mombasa. I also interviewed five male healers. These interviews were not included in the quantitative analysis, but they added depth in understanding healing in Mombasa. The purpose of healing, I was informed was to regain 'balance' or return the body to the state of 'wellness' by finding out what has afflicted the body or interrupted or disturbed its function. These healers at times had their own herbs and remedies which they prescribed and offered to their patients. Alternatively, they sent their patients to herbalists with prescriptions.

Herbalists are important healers in Mombassa, they are mostly male, and their fees vary depending on the ailment. The herbalists have an empirical knowledge of the midicinal properties of selected leaves, barks, saps, roots and other natural products. The use of herbal medicines begins at home in Mombassa. One tree, the *muarubaini,* was said to be useful in the treatment of treat forty different ailments. Drinking a boiled potion from the leaves of the *muarubaini*, treated fever associated with malaria, flu or pneumonia. The herbalists in their shops or at the market prepared and sold what could not be provided in the home. On the streets are also charlatans who claim knowledge and competence in healing but prey on individuals who are desperate for treatment. There are two types of herbalists, one who has a diagnostic and treatment center, while the other sells his ware at shops or the market place (Beck 1981, Good 1986, Mburu 1992). The most frequented herbalists in Mombasa are in two shops, one located in Old Town, owned by an Indian healer. He stated the shop has been family owned since 1873, and supplies the town with therapeutic treatments from India, China and the Middle East. The

second shop in Mwembe Tayari provides more local herbal remedies, though here, too, non-local medicines are ordered from Tanzania and the Middle-East. The owners of both stores explained that they did not diagnose or prescribe treatments. There are other herbalists across Mombasa. Some sell their treatments at the local market. Others sell along the road, where people stop to make purchases. Women herbalists who treat pregnancy related conditions practice mostly from their homes, though a few have stalls at the market (see Chapter 4).

Diviners are perceived to have a special "gift" or supernatural powers. They vary in skill levels, specialization, knowledge and beliefs, the types and organization of therapy they provide, and personal mannerisms. Diviners in Mombassa claim, and some are believed to have the ability to diagnose and prescribe treatments, though do not offer treatments. The diviner "gives the ultimate etiological conditions of a psychic, somatic or psychosomatic disorder, interpersonal alliances and conflicts" (Mburu 1981:172). The importance of balance in interpersonal relationships is part of being a moral person. Fairness in the treatment of others protects a person from misfortune and illness. Wishing ill or hostility on another person also brings harm to oneself (*mchimba kisima huingia mwenyewe*). In addition, unresolved social relationships are viewed as causes of poor health. For example, a pregnant woman's weight loss might be attributed to poor nutrition, her relationship with her mother-in-law (who might not have accepted her) will also be seen as associated with her poor health.

A common Swahili is that *"daktari si Mungu*" (the "Western doctor is not God") leads individuals to seek other local traditional/religious therapists. The incorporation of Muslim diviners/healers differentiates the use of diviners from other non-Muslim groups.

The Muslim cleric, who is almost always a man, has a role as a diviner by using texts from the Quran, astrology, numerals or rosary. He also divines through dreams, spirit possession and necromancy (1980: 84).

Islamic Healers

"Islam affirms the power and will of Allah in all things, including suffering" (Whyte 1997:47). Faith, illness and healing go hand in hand and it is common to hear a sick person and his or her therapy managers to state that the outcome of the illness is Allah's will. Cure does not take place if not willed by Allah, and fatalism is the doctrine sometimes adopted by believers (Feierman and Janzen 1992).

Islamic medicine in Mombasa dates from the 8th or the 10th century (Trimingham 1980), and is still practiced. Islamic healers incorporate Prophetic (Arabic) and Galenic humoral medicine to view health and assess the body's response to illness. Humoral medicine emphasizes on the hot/cold dichotomy, specifically in foods and the environments. Greenwood (1981) and Morsy (1993) provide a detailed narrative on humoral medicine in Morocco and Egypt which jibes with similar beliefs in Mombasa (see Chapter 6). From a similar perspective, but adding women's knowledge about pregnancy and the practices surrounding childbirth, Obermeyer (2000) has investigated medical pluralism and humoral medicine in Morocco, while Mandersen (1981) describes humoral practices and childbirth in Malay.

The imbalance demonstrated by disease is said in this system to be due to features of physical and spiritual bodies. Physical imbalance can be caused by exposure to the environment. Imbalance related to the environment is caused by the air or wind (*upepo*), cold or hot temperatures. A woman complaining of having a fever (*homa*) could be reacting to her body's discomfort to environmental heat or cold.

Food intake, lack of sleep or rest, and one's emotional state (Abdalla 1992: 182) are related to certain illnesses. Emotional state is similarly linked to 'balance' or 'imbalance' of hot and cold. A hot tempered person suffers from headaches, while a cold natured individual gets depressed (*baridi ya bisi*). Healing consists of rest, diets, fasting, an array of medicines, and the extraction of impurity by bleeding, scarification or branding, vomiting or use of enemas (Slikkerveer1990).

There is also a belief that spiritual beings cause illness. Morsy (1993: 111) describes them as "subterranean beings" and assigns their effects into two categories, direct and indirect. Direct spirits afflict individuals through possession, while indirect beings are controlled or manipulated by others through sorcery. Waite (1992: 214) explains that "spirits are believed to bring certain kinds of illnesses and other afflictions to individuals, to families and to the whole communities". She specifically identifies ancestral spirits, which represent the founders of an individual family. In Mombasa these are termed *majinni ya ukoo*, and those of the community/territory (*majinni wa mji*). Spirits in Kiswahili are called *jinni* (plural *majinni*), *pepo* or *ruhani.* These are mischievous and although they may cause discomfort, they do not cause serious illness or death. For instance, a woman who has a *ruhani* can be pregnant for more than a year, (see Chapter 6) and will not deliver until the *ruhani* is appeased.

Spirit possession can take many forms, from mild affliction (where a person portrays physical discomfort) to altered social behavior. Serious symptoms of suffering include body weakness, loss of appetite, loss of weight, headaches, and sometimes shaking of the body. Sorcery accusations reflect strained social relations and could be due to revenge. Sorcery can be used to create infertility, impotence or deaths of infants.

The "evil eye" (*jicho)* or *hassad,* refers to harm inflicted on an individual due to feelings of envy or jealousy. In Islam, *hassad* is "legitimized by reference to Quranic descriptions of the malevolent power of the *hassid.*" or possessor of the evil eye (Morsy 1993:110). *Hassad* is associated with creating misfortune, illness and even death. A woman who says that someone else's baby looks healthy might be the target of blame if that child suddenly becomes ill. Her eye, whether consciously or not, would be the cause of ill-health. Women who have miscarriages or infant deaths might be asked if they are objects of *hassad (je umehusudiwa*). Moreover, when a multitude of misfortunes occur in a household, the inhabitants question if the home has *hassad,* which. if true, would require a healer to diagnose and remove the cause of the *hassad.*

Hassad is different from sorcery which is associated with *shirk* or the acceptance of a power greater than God—the gravest, most unpardonable sin in Islam (Feierman and Janzen1992). Superstition and practices associated with it are slowly diminishing due to Western education and culture on the one hand, and Islamic orthodoxy on the other. Muslim women who still go to diviners or healers that believe in sorcery do so secretly. This practice is associated with heretics and therefore sinful (ibid).

S*harifs* are people who claim genealogical descent from the prophet Mohammed. They assert, "or are imputed by their followers, to possess *baraka or* special blessings from God, which can be used in healing" (Beckerleg 1994). Besides the *sharifs,* there are also scholars of the Quran (*maalims)* with knowledge of Islamic law and Arabic medical texts. This body of knowledge is taught locally or in the Middle East. The emphasis on treatment for hassad or spirit possession is based on theories of balanced hygiene and diet, and also, at times, exorcism. Portions of the Quran are prescribed, and written to be

worn as an amulet. It may also be written with food coloring on a plate, which is rinsed out and given for healing or prevention. Although non-religious, some Muslim healers use drumming (*ngoma*) for ritual therapy. Janzen (1978: 21) has studied healers and the use of *ngoma* in central and Southern Africa and explains that *ngoma* is used for ancestral worship, while divination and healing (*ngoma za kutibu*) are used for healing.

The Popular/ Lay Sector

Dean (1989:117) defines self-care as the actions that "represent the range of behavior undertaken by individuals to promote or restore their health". Kleinman (1978) states that in both Western and non-Western societies, individuals self-treat 70-90% of health problems in the home. These decisions to self-treat are made by laypersons who face real symptoms and who seek to improve their health without medical supervision. A layperson may choose to delay professional assistance until there is failure of home remedies or worsening of symptoms.

The utilization of Western pharmaceutical and local herbal remedies is widespread in the homes in Mombassa. Ethnicity, social class, education and gender play an important role on influencing how home remedies are undertaken. Women and the elderly tend to self-treat more than others. Geissler et al. (2000) found in Western Kenya that the use of home remedies and self treatment starts with primary school aged children, beginning with treatment of minor ailments, such as headaches, body pain, coughs and malaria. This is also common in Mombassa. Added to home remedies are the prescription and non-prescription medicines that are received from friends and relatives who work in dispensaries or hospitals. With chronic illness, self-medication is at times in conjunction with prescribed medicines. Individuals in a family share and use prescribed medications

without seeing a physician because the treatments are available at home and because it decreases the hassles one has to endure at the local hospitals.

CHAPTER 4
METHODS OF DATA COLLECTION

Introduction

Methods in social research consist of observing, listening, asking and reading. In this study, I used all of these general methods to study the meaning of health behavior among some women in Mombassa. In this chapter, I explain the specific methods that I used, including a questionnaire and participant observation, and how I selected the sample of women I studied. As a native of Mombassa, I encountered some problems in collecting data there, but I also had some advantages. I explain these problems and advantages in this chapter as well.

Research Design and Objectives

One advantage of being a native of Mombassa is that I already am fluent in the local language, Swahili. I was educated as a nurse in Nairobi and practiced in hospitals there, plus in Mombasa for 6 years before coming to the United States. Over the years I have maintained both family and contacts within the medical community in both places. I have a few family members in Mombasa, during this research I lived with one of my cousins and her family whose residence was in Mwembe Tayari which is in the middle of town. This facilitated easy ambulation around town, and where places were not within walking distance, public transportation (or the matatu) was easily available. With all of this social support, I was able to conduct this study in six months, from June to November 2003. I used Handwerker's (2001) guide on how to perform an efficient and "Quick Ethnography", plus Bernard (2002), and Patton (1990) on how to design and

perform fieldwork. During the summer of 2002, I went to Mombassa to reestablish connections with people who would become my key informants, including physicians and nurse-midwives who trained in 1977-1982 when I did my nurse/ midwifery training in Nairobi, Kenya. These gatekeepers became my first informants and helped me to determine what was feasible for my study. They told me which officials to contact when I returned a year later for fieldwork, and they continued to help me with preparations by e-mail and telephone after I returned to the United States to complete my proposal, develop my initial questionnaires and received Internal Review Board (IRB) approval from the University of Florida. Before leaving the United States, I as well mapped out a time schedule and structure for data collection.

I spent the first two months in Mombasa building a foundation for fieldwork. This consisted of initiating pertinent conversations, intense listening and informal interviews – what Handwerker (2001:106) terms, "first and second order gossip." During these two months, I also visited official and mapped out interview sites. Data collection and recording, however, was continuous, from the time I arrived in Mombassa until the day I left. I started with general, grand-tour questions, as Spradley (1979) called them: "Tell me about problems that women have here with health care?" "Do you have any problems with health care?" and so on. These questions elicited a lot of information very quickly about health issues faced by women in Mombasa and helped me establish clear objectives.

My objectives were:

1. to describe Muslim women's knowledge and attitudes about mother-to-child HIV transmission
2. to describe the health care decisions made by Muslim women during pregnancy and to identify patterns of behavior in seeking prenatal health care

3. to identify and describe the health care facilities used by Muslim women durin_ pregnancy and childbirth; and

4. to determine the factors that predict whether Muslim women make adequate use of maternity care in Mombasa.

Native Ethnography

As a native going home to conduct doctoral research, I had some advantages, but also encountered problems that outsiders would not have experienced. Clearly, native ethnographers have a more difficult time maintaining objectivity than would someone coming in fresh from the objectivity than would someone coming in fresh from the outside. I realized as I did this research that there might have been cultural patterns that I missed, taking them for granted – patterns that, as Bernard (1996:154) observes, an outsider would see right away. On the other hand, as Bernard and Salinas Pedraza say quite explicitly, (1989:5) "all ethnographies are subjective and selective. "The object in social science is not to be devoid of an agenda. This is clearly impossible. The object is to maintain standards of data collection that eventuate in credible work. Anthropologists are enjoined to conduct research from a position of cultural relativism – that is, to avoid making judgments of the cultures we study. "Each way of life," we are told, "should be evaluated according to its own standards of right and wrong" (Walbridge and Sievert 2003:2). I duly entered the preliminary stage of my research in 2002 without preconceived ideas about what I would find, but I returned that year with objectives and hypotheses. The participant observation data I collected were verified before leaving Mombasa with key informants for variability and accuracy.

On the positive side, being a native of Mombasa made it possible for me to conduct this research relatively quickly. I was accepted quickly by medical service providers as a member of their community and by Muslim women informants as someone with whom

they could speak frankly in their native language, using the kind of idioms and discourse cues that native speakers everywhere rely on for deep communication. As a result, I was able quickly to understand the issues that were important to these women. A lot of the nurses express pride in the fact that I was studying for an advanced degree, plus impressed that I went back "home" to do this research. Many stated that once people leave they do not want to get back. The acceptance and cooperation by some of these nurses, particularly Sister Asya (as she was called by most of those who knew her) was particularly important. She took me under her wing and introduced me to other clinicians and key people in neighborhoods that I did not know personally or had forgotten about. Sophia, another one of my cousins, helped me establish relationships with traditional birth attendants, herbalists and Islamic healers whom Asya did not know. Michrina and Richards (1996:75) observe that "there are two types of people in the field, those who are knowledgeable and articulate, and those who can help you make contacts within your group of study." Asya and Sophia had both of these qualities and were invaluable to my research, but the point I want to make here is that my relationship with them was based on the fact that I was one of them – a Muslim woman health-care provider.

On the other hand, familiarity also breeds distrust. Concurrently with my study, there was a study going at one hospital on a drug (nevirapine) to reduce mother-to-child HIV infection. I was requested by the nurse in charge of the study not to interview the HIV positive women, because the woman did not want their identity known by anyone who might know them or their families. Other informants agreed to be interviewed, but were clearly uncomfortable and guarded, also not wanting to disclose personal information to someone who might know people in their families. For example, in one

interview with an acquaintance I sensed her discomfort from the very start when I asked about her marital status. She had heard, she said, that her husband had taken a second wife, but had not openly informed her, so she pretended not to know. She hoped, she said, that I would keep this information confidential since, as long as her husband thought she was not aware of his action, she would not have to share days with the other wife. (Polygynous marriages are common in Mombasa and co-wives can demand to have the husband share days between households). My first priority, of course, was to conduct my work without doing any harm. This meant that I had to be alert to the need for confidentiality at all times and for keeping informants plus advisors anonymous. Except for some consenting individuals such as Asya and Sophia, pseudonyms replace names of all informants in this study.

As I did my fieldwork, I ran into old friends and acquaintances. I accepted invitations to weddings, was informed about funerals and social or religious activities. Most of these events became information grounds for my research and also provided a needed distraction from work. At these function with friends I was able to discuss informally various issues surrounding women's health and particularly preventative care. However, these outings were also a distraction because of the short time in the field and eventually they became tedious. In addition, I lived in the middle of town with a relative and her family in the neighborhood of the people I was studying. This was perfect as a participant observation field site, although I did not encounter culture shock, there were many changes in Mombasa since I left the island. I have lived in the United States for the last twenty years, and although I have gone back every other year to visit, these short visits had not prepared me for the changes I would find in my longer stay for fieldwork.

For example, public transportation workers found it strange when I asked them to tell me when I needed to alight at my destination. The names of places were the same, but the mode of transportation had changed. Public transportation was no longer with buses, as had been the case when I lived there earlier, but with fast moving vans called *matatus*. Of greater significance, despite the many benefits of native ethnography, I found myself critically examining my relationship with both of my own societies, the one in Mombasa and the one in the United States.

Sampling Design

My objective was to interview between 250–300 Muslim women who had delivered no more than eight weeks prior to the beginning of the study. According to the Kenyan national census, there were approximately 48,000 women of reproductive age in Mombasa Island in 1999. Figure 3.1 shows a map of Mombasa with 13 areas marked for high concentrations of Muslims and six health care facilities used by Muslim women. I screened potential participants for this study at each of the six facilities and also interviewed some women at home to capture some of the 5% of women who do not deliver at any of the health-care facilities shown in Figure 4.1. There are three private hospitals in Mombasa. I did not interview at these facilities because they are used mostly by women of higher socioeconomic status and who are, therefore, likely to know about and use effectively, all available health-care resources (Enderlein et al. 1994, Ivanov and Flynn 1999, McKinlay and McKinlay 1972).

During screening, I sought to maximize variation in age; ethnicity, education, parity and socio-economic status in order to maximize intra-cultural variation (see Appendix 1 for the full questionnaire). Table 4.1 shows the distribution of the sample across the seven venues. With this purposive sampling strategy, I was able to interview

280 Muslim women who had delivered recently, whether in a hospital or other healtl facility or at home. Of the 280 interviews, 265 had complete information and consist of women during their six weeks postpartum period. These interviews are the subject of the analysis in Chapter 5. Additional information gathered during this study has been added to explain women's health seeking behavior and add to the qualitative analysis in Chapter 3 and 6. In addition, I interviewed several clinicians, Islamic healers, traditional healers and birth attendants, and Islamic religious leaders (Imams) about Muslim women's maternity health, particularly in relations to HIV/AIDS.

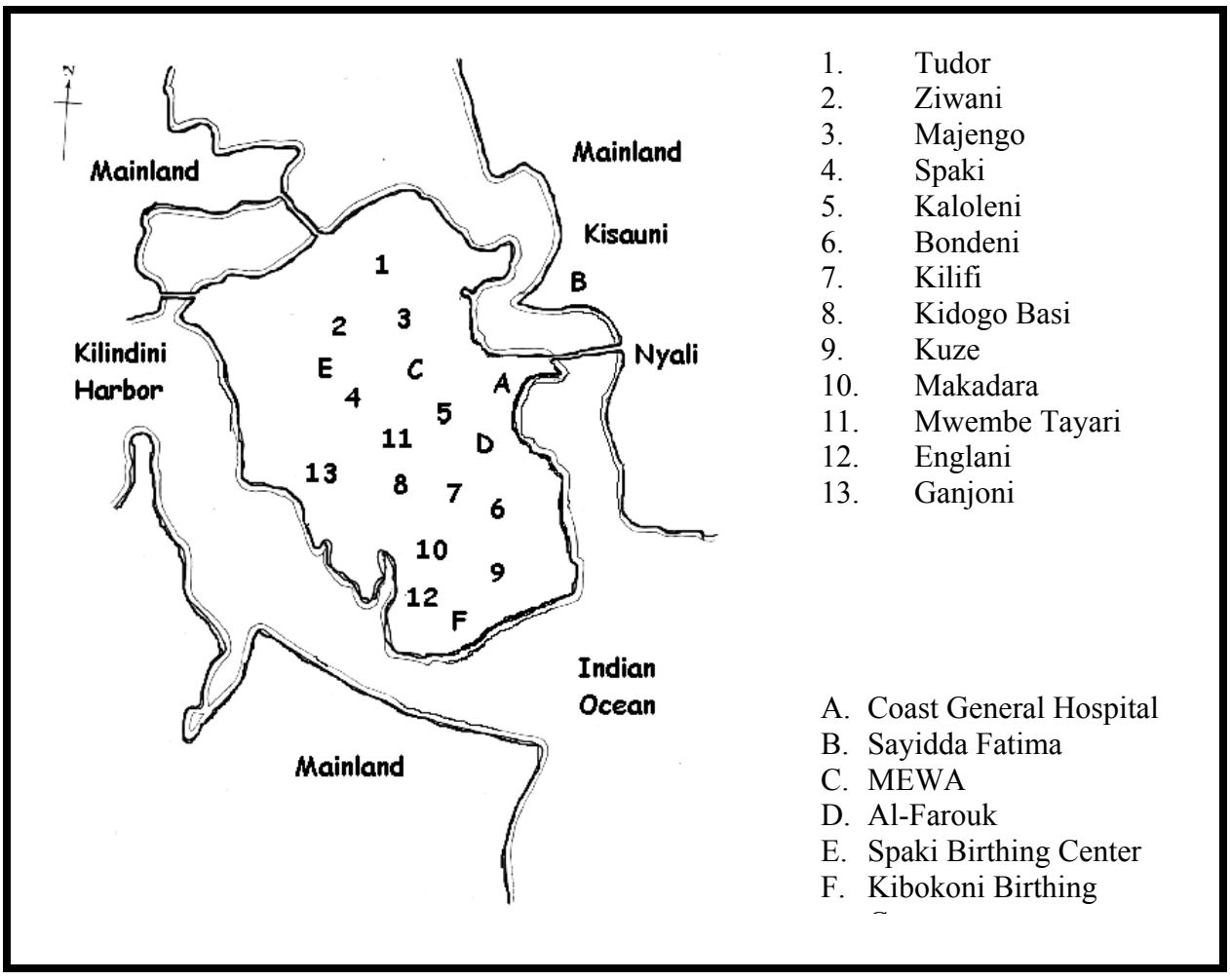

Figure 4-1. Data collection sites

Table 4-1. Interview sites

Location of data collection	Number of interviews conducted
Coast General Hospital	50
Sayyida Fatima Hospital	50
MEWA Hospital	50
Al-Farouk Hospital	20
Spaki Maternity Home	20
Kibokoni Maternity Home	20
Home – visits	55

Data Collection

Interviews from the questionnaire: The content of my questionnaire is based on studies of maternity care by Celik and Hotchkiss (2000) in Turkey, Chapman (1998) in Mozambique, and Magadi et al. (2000) in Kenya. I added questions about knowledge of HIV/AIDS and its prevention. To pretest my questionnaires, I contacted the owners of the two home-based birthing centers in Mombasa and obtained a list of mothers in the two respective neighborhoods who were clients. I interviewed ten mothers in their homes and tested the questionnaires. I recited the informed consent protocol to each pretest participant in Kiswahili, and each of them and received their permission to continue with the understanding that I would hold their information in confidence. After ten interviews, I learned what worked in the questionnaire and what needed rewording. I wrote the questionnaire in English and translated it into Kiswahili, taking care to frame the questions properly in the local idiom. For example, the question “did anybody help you decide when to start prenatal care?” a direct translation would sound curt and provide a

yes or no answer. This would have to be followed with "whom?" However, rephrasing it by asking, "mshauri wako ni nani ukitaka kwenda kupima?" ("Who assisted you in the decision to prenatal care?), would provide both answers. A few of the respondents that I pretested the questionnaire on were uncooperative, giving short, abrupt answers; some were reticent because they felt embarrassed by the questions, while others were verbose. After correcting the questionnaire (see Appendix D), majority of the respondents were very cooperative. I controlled the interviews by leading and providing the appropriate verbal and non-verbal feedback.

Structured interviews: The questionnaire consisted of structured and semi-structured interviews. The structured component comprised a series of items on socio-demographic features, and some questions on the availability of medical insurance. Marital status – a socio-demographic feature that usually elicits a simple answer – was quite complicated. During the pretest, I found that some women hesitated to answer a query about their marital status and would not affirm or deny whether they were in a monogamous or polygynous relationship. One woman responded: "How would I know?,Maybe I am the only wife, and maybe I am not." Thus, in addition to the usual "yes" and "no" answers for this question, I wrote side notes to include women's added responses. The question on occupational status also caused some difficulty. A number of women initially said that they were housewives, or provided one occupation. However, with time I noticed some were involved in different trading practices from the home. I reworded the question to include women's activities or jobs that supplement their income.

Education, both secular and religious, is an area of great concern to the women I interviewed. They voiced their frustration at not being able to continue with their schooling because of cultural or religious restrictions, either as understood by them or as imposed by their families.

Other components of the structured questionnaire included education (both secular and religious) of the spouse or partner, spouse's occupation, and whether the spouse or partner was employed in Mombasa or resides elsewhere (approximately 15% of partners in this study live or work for prolonged periods out of Mombasa). I also asked about whether the partner had medical insurance.

Finally, I assessed socioeconomic status with data about the status of the home. I asked whether a woman owned or rented the home she lived in; whether the home had electricity; and the source of water for the home. There were three sources of water: tap water (from indoor plumbing), well water, and water bought from an outside source. I observed women spending a lot of their day either collecting water or waiting for someone to deliver water. Piped water in Kenya is state controlled, and when there is a shortage, it is rationed to certain hours of the day. Water is sold from state-run neighborhood stations that open from 6 a.m. to 5p.m. For a payment of a few Kenyan shillings (Ksh.) 25 which is about U.S. 32 cents, water can be delivered to one's home, but if the deliverer is busy, waiting for water delivery could use up the whole day. The house I lived in used well water for every other need, except drinking and drinking water was bought twice a week. I had the experience of wasting most of a day waiting for drinking water to be delivered. I understood when women complained and stated their frustrations about access to water and their relief when water arrived.

Finally, a section of the structure was about women's awareness of how HIV might be transmitted from mother to child. If a woman said that she knew the manner of transmission, then the next question was about the source of her knowledge: word of mouth, school or college, a health care provider, or the media (television, newspapers, or radio). A follow-up question probed whether the woman thought her knowledge had changed her behavior. I assessed behavioral change by asking if the women had been tested for HIV, and if the test was positive, if she had delivered in a medical facility that offered procedures to prevent passing the infection to the infant. Although this last question was placed under the structured interviews, it could as well belong to the semi-structured section.

Semi-structured interviews: The semi structured component of the survey dealt with women's pregnancy and childbirth experiences. These experiences are private and personal and were embellished and dramatized or downplayed, depending on each woman's circumstances and perception of those circumstances. I was able to interview each woman only once and allotted up to two hours for each interview. I was, however, sometimes unable to complete the work in this time. Some of the narratives were joyous, but the heartrending experiences of others were so emotionally wearing, on me as well as on the narrators, that we often had to take breaks in the middle of the interviews. Some women had complicated pregnancies and were strong narrators, while others were first time mothers without complications. This, too, played a role in how much time was needed to complete each interview. During the open-ended narratives, women expressed their relief or frustrations about pregnancy and childbirth and mentioned people who had

participated in their journey to motherhood, including partners, family members, friends, neighbors or health care providers.

In this section of the survey, I also developed pregnancy histories: number of children, miscarriages, abortions, and stillbirths. I felt that many respondents answered these questions truthfully, except the question about abortions. Abortion is illegal in Kenya and it is forbidden in Islam, but it is widely known that Kenya has a high rate of unwanted pregnancies that lead to abortion (Bauni and Jarabi, 2000). One of the leading causes of hospitalization in Kenya in 1999[1] was admissions after abortions. Data on abortion prevalence between provinces showed the Coastal province (including Mombasa) had lower rates of number of admissions than all other provinces in the country (Ministry of Health Report 1996-1999).

I inquired about the date of conception, when and where prenatal care was started or continued, and who assisted or impeded these decisions. I asked about transportation to and from the clinic and whether the woman liked or did not like the health care center or provider. Women had a lot to say about the health care system (see Chapter 5). In this final section, I explored health care decisions – that is where, when and why respondents had begun treatment when sick during the pregnancy. Answers provided were further probed for diagnosis given, length of treatment and effectiveness. I was able to extract from these data a taxonomy of the major illnesses or problems that are associated with pregnancy, the type of healer used, and a description of the treatments The main conditions that were consistently mentioned were *homa* (fever); anemia; *shango* (vaginal discharge), possibly due to fungal or bacterial infection; body aches and pains; and

[1] The updated Ministry of Health report for the years 2000-2003 were not published while I was collecting this data.

mwajuu, with some symptoms that resemble high blood pressure in pregnancy. Some of these names of illnesses, such as *mwajuu* and *shango* were unfamiliar to me, despite having practiced nurse- midwifery in Mombasa from 1982 to 1983. I was also unfamiliar with some of the treatments for illnesses that were mentioned, including some home remedies, some traditional and Islamic healing practices, and even some treatments used among various ethnic groups living in Mombasa. "Even the most experienced of 'native' anthropologists," said Narayan (1993:683) about her ethnography in India, "cannot know everything about his or her society."

The Research sites

As shown in Table 4.1, I did participant observation at four hospitals, two home-based birthing centers, and visits to mothers in their homes. In the hospitals (Coast General, MEWA, Sayyida Fatima and al-Farouk), I observed women as they came to clinics at three different stages: (1) for prenatal check ups, (2) during postpartum assessment, and (3) when they brought their infants for the six-week post-delivery evaluation. The second and third stages were logistically feasible; for this study.

Coast General Hospital – the waiting room: At Coast General, women brought their babies for a six-week post-delivery checkup on Mondays, Wednesdays and Fridays between 8a.m. to 1p.m. These hours were hospital policy and were rigidly enforced. Women who came late did not find a clerk to give them a check-in card or see a health care provider. The benches were full by 7a.m. and a quick hustle ensued to the clerk's desk as he sat. First, women had to register their babies into the hospital system and receive a patient number. Next, they had to pay for services in another room. Then, women waited in a second line for a nurse to check the baby's weight and temperature and assign them a room or cubicle to see a clinician. This process, including the checkup

by the clinician, took from three to five hours. Many women grumbled and expressed frustration or sighs of resignation during the course of a normal day at the clinic. Some infants cried while others were continuously breast, or bottle-fed. Mothers changed diapers while waiting to be seen. I found a quiet corner and called mothers aside for interviewing. I asked the other mothers to reserve the informant's space in line, so that she would not miss her turn to be seen by a clinician. During these moments, I had the opportunity to listen and observe the interaction between the women, the health care providers and other hospital personnel.

This waiting to be seen by a clinician was for well and sick babies and there was constant commotion as women moved from one area to the next. The whole area was open except for walled partitions. Once, a mother began wailing as her child died in her arms, waiting to be seen. I learned later from the matron-administrator of the clinic that women were supposed to take very sick infants to the emergency room. This was not something that was widely known or understood. In fact, I had to ask about this incident to find out that it was possible for mothers with very sick infants to get quick treatment. This event was so distressing to me that I stopped interviews for the day and went home.

Coast General Hospital – the postpartum ward: This is part of the maternity floor where women stay to recover after childbirth. Women stay for 2-5 days post-delivery if there are no complications and leave after payment for hospital services. Some are being given medication intravenously and some require blood transfusions due to complication in delivery. Other women are well enough to walk around to visit each other, or go back and forth to the toilet. Infants are either asleep, breastfeeding or having their diapers changed in this area. The room was quiet, except for an occasional nurse

passing by on errands. I spent the mornings in the mother/baby clinic, and afternoons and evenings conducting interviews in the post-partum area. I left during visiting hours to allow family and friends to visit. I would inquire from the nursing staff which patients not to disturb before interviewing.

MEWA / Sayyida Fatima and Al-Farouk hospitals: These hospitals were designed to cater to a Muslim clientele. Although the administrators and health care providers are Muslims, less than 15% of respondents stated that they chose these institutions for religious reasons. As I will explain in the following chapter, these hospitals were mostly chosen because of distance, cost, and the availability of specific services.

As with Coast General, I conducted interviews with mothers who brought their infants for a well-baby check after six weeks and in the postpartum ward. Compared with Coast General, service at these two Muslim hospitals was much quicker. The average waiting period was about an hour and all procedures were done in the room with a nurse, though a physician saw patients when necessary. I asked to conduct interviews with the women before they left the hospital. I also spent time here observing how women interacted with each other and with health care providers. I noticed that unlike the other government clinics prenatal classes were not offered, and women left quickly after receiving services. In fact, I had a hard time getting some women to stay for interviews. Overall, though, I was able to interview most of the women who I approached. One reason for my success, according to other nurses at these two hospitals, was that I dressed in a *bui bui* or *abaya,* the black overcoat and scarf worn by almost all Muslim women in Mombasa. Had I dressed as hospital personnel women hurrying to leave after being seen

would not have been as ready to linger and sit for an interview. My dress as a Muslim woman was a cultural asset and helped me to develop rapport with potential informants (see Warren and Hackney (2000:22) for more on the importance of dress in fieldwork).

Time spent in the hospitals helped me develop close relationships with the clinicians. In one institution, I was asked to assist with deliveries when the hospital was short staffed. This would have allowed me to move entirely into the role of full participant as observer, but I declined politely and disengaged in order to maintain a different relationship with patients than that of the staff. I opted for more detachment and less engagement, as Hayano calls it (1979:113). Balancing multiple identities as nurse, native and researcher was a constant in this study. Opting for a more engaged role as a clinician might have produced more data, or different data, of course, than those I was able to collect.

Spaki and Kibokoni maternity homes: In these two biomedical facilities, women were observed as they came in for prenatal or postpartum visits. Others brought male infants for circumcision, or pregnancy related problems. Deliveries ranged from one to two a day, recitations from the Koran was done while the women were in labor, and women were also encouraged to recite from the Koran in order to distract them from the pain and provide spiritual comfort. I asked women specifically why they had chosen to use these maternity centers. The environment was relaxed and jovial, and if the women had not stated their specific reasons for coming, one might assume they were there for a friendly social visit. I did twenty interviews at each of these two homes and five more in each neighborhood to get opinions about these homes from women who did not use them. I also interviewed the nurse, the assistant and the surgical technician about their

techniques and their rapport with the people they served. With my knowledge as a clinician, I could not help but judge the care given to women. One of the two maternity homes did not have a full-time qualified practitioner, and some of the decisions of the practitioner on hand were not reassuring. Once, when a woman came in complaining of premature labor, she was not referred to a hospital where she could receive urgent care. Instead the patient was massaged and sent home. I provided general suggestions in my discussions with the practitioner as we compared notes about different ways to assist women and improve their health care in various conditions, but I did not intervene directly with nursing or medical given.

Mama Msena and Bi Zuena – Traditional birth attendants In comparison to the home-based maternity clinics, where there was a semblance of biomedical influence, these homes were regular living arrangements with a room assigned for assisting in childbirth. The term for one who assists with childbirth is *mkunga or mpokeaji* which translates as "one who receives" or assists. Both women were warm, motherly and were referred to as 'mother', 'aunty' or 'grandmother' by their clients, as if these traditional birth attendants were members of the clients' families. As I visited these homes, I realized they were not only used for childbirth, but for advice on child rearing (particularly of daughters) and for counsel on marital relations. It was definitely a women's domain. Men who stopped in were on errands for their wives.

The birthing rooms in both homes were empty, except for a bed with a thin mattress, covered in plastic, and a pillow. The patient had to bring her own wraps, or khangas*, which are* colorful rectangular cloths, 1 by 3 yards in width and length. These khangas had multiple purposes and were used as a bed covering, or as a body wrap while

the woman was in labor, or to cover the baby before going home. Women who came to deliver were also instructed to bring their own surgical gloves (a recent practice that has been encouraged since the advent of HIV/AIDS), cotton balls, a blade, tie string, and disinfectant. Mama Msena kept her medicinal remedies in the courtyard, where she also had a variety of herbs, and medicinal plants. She was petite, quick witted and full of humor. Many women in the neighborhoods across Mombasa mentioned her name as I conducted interviews. Mama Msena lived on the outskirts of Mombasa, but women came to see her for different ailments, particularly infertility. Women stated that they respected her because of confidentiality and generosity. Women came in for massage therapy, particularly after delivery, and interviews were conducted after their visits in the courtyard or by following women to their homes.

Women went to Bi Zuena for different reasons. She had worked in a hospital as a clerk, before becoming a traditional birth attendant (TBA). She did not indulge in herbal healing, although she performed massages. She stated that she was conducting less childbirth deliveries with the intention to discontinue the practice. One of the main differences between these homes and the biomedical facilities were the one-on-one rapport between care-giver and patient. About thirty percent of women in this study used home-based maternity services. From my interviews with these women, they understood the dangers that this choice involved, should an emergency arise during delivery, but they chose to overlook those dangers. I will revisit this issue in Chapter 6. Some women who could afford the other biomedical facilities still attended the services of the TBA and other healers for home remedies and massage therapy.

Traditional Healers: I reached the Majengo market as directed to meet Bi Riziki, a healer. I had been informed she had expertise in treating problems associated with pregnancy. After crossing rainwater-filled potholes on the path, and dodging human and automobile traffic, I arrived at the entrance to the market. I asked for Bi Riziki and was directed to her stall. She was standing by a shelf filled with a variety of herbs, roots and some form of vegetation. Her son and also assistant was welcoming, but she looked at me suspiciously, particularly when she saw I had a tape-recorder and camera. I assured her that I was not going to use them without her permission. She relaxed temporarily, but was on guard throughout this initial visit. I refrained from asking her or her clients questions and instead observed their activities. On future visits, she calmed down, and I was able to interview her and some of her female clients. She even allowed me to audio tape her and take pictures, something I had not been able to do throughout this study. Women came to Bi Riziki with complaints of gynecological and obstetrical problems. At times, she walked away with them from the stall, for privacy, something that I also imitated when I interviewed one of her female clients. Women also brought their partners and infants for consultation.

The second healer Bi ZamZam was from a different ethnic group from Bi Riziki. She was more relaxed, and had no reservation in explaining her different types of remedies. Women came to her mostly for treatment of anemia and for massage therapy. She referred some of her patients to Bi Riziki and the hospitals when the ailments were beyond her scope of treatment.

Home visits – "Are you an American spy?": Conducting home visits was the most difficult part of the data collection. I initially wanted to interview women in their

last month of pregnancy and do a follow up visit after they delivered. This proved to be impossible because most women (especially those unemployed) moved to their mother's or in-laws' house for the forty days after delivery. This is a cultural practice called *arubaini* (forty days) to help the mother and baby recuperate after the strain of labor. The woman is considered unclean after childbirth, and is excused from household duties, until after the forty days. The practice of *arubaini* varies in Mombasa's different ethnicities and economic status. I will return to this issue and how it affects the use of health care services in Chapter 3.

To find women whom I might interview in their homes, I walked door to door through the neighborhoods mentioned in Figure 4.1 to inquire if there were any women in *arubaini*. These neighborhoods are densely populated, with houses very close to one another, and people are involved in each other's affairs. This made it easy to find mothers in *arubaini.* On the other hand, home visits were time consuming, because it was difficult to enter and exit immediately after an interview. Some people wanted to get to know me and my work, and asked about life in America. I developed a short and uninteresting narrative that I kept repeating and that would not prolong my stay. Most of the homes consisted of extended families or had visitors to see the mother and new baby. One-to-one interviews were difficult to conduct, with a lot of chit-chat before and during the interview I avoided late evenings in order not to interrupt meal and family times. I also excused myself when partners arrived home. I did this for two reasons. First, I understood the culturally appropriate gender roles. Women are expected to cater to their partners when the latter arrive home. Second, while I encountered few men during this study, those whom I did meet were suspicious and questioned me about my research,

particularly when I mentioned that I was associated with a university in the United States. This suspicion from men made the women uncomfortable and I knew that under these circumstances, their answers to my questions would be inhibited.

The suspicion among men reflected anti-America sentiments in Mombasa. The American invasion of Iraq started in March 2003 and I started home visits in August of the same year. Various groups of Muslims in Mombasa, particularly young men, had demonstrated against American involvement in Iraq. There was plausible suspicion that some Muslims were involved in the Al Qaeda movement, which resulted in a joint effort by American and Kenyan intelligence services to search Muslim homes in Mombasa. This created an ambience of distrust and I was at times asked by men, during my home visits: "are you an American spy?" or "how do we know that you were not sent to investigate about terrorism?" The women did not question me, but once their partner had created an air of distrust, women became wary and their answers to questions became cautious. Warren and Hackney (2000: 17-19) observe that anthropologists have been considered as spies from the United States government everywhere they have done ethnography. They add, however, that men are more likely to be suspected of being spies and indeed, in Mombasa I felt I was regarded with less mistrust because I was a woman. Being a woman, I was perceived as having less power, and therefore not dangerous.

These interviews of Muslim women in Mombasa about their pregnancies and childbirth experiences were, at times, cathartic. I found it hard to remain uninvolved, emotionally, and to focus on data collection, but I did not let the need for objectivity stop me from answering questions from my informants or assisting them with information about women's or infant's health, care of infants, breast feeding, mixed feeding, and so

on. Women disclosed their health problems to me and I provided advice within the scope of my knowledge as a nurse practitioner. Some of my advice was practical, such as how to position infants and prevent nipple soreness or breast engorgement. At times my advice turned out to be impractical. For example, I counseled women to use canned infant formula instead of diluting cow milk for feeding newborns. I later learned the difference in cost. My twenty years' experience as a nurse and midwife helped me establish strong rapport with my informants. There was a cost to this, as well as a benefit, for with that rapport I heard many stories of pain and suffering.

Statistical methods

The data from the 265 structured and semi-structured interviews were analyzed using SAS and SPSS. The questionnaires and codebooks for the structured interviews are in Appendix 1.

There are two dependent variables in this study, both of which involve the use of maternity health care services. One is the use of prenatal care and the other is choice of a birthing center. Since the dependent variables are binary, I used a logistic regression model to estimate the probability of women's behavioral choices, given a series of independent variables.

The narrative data were analyzed with the help of Atlas/ti (scientific software – version 4.1). Analysis of women's narratives about their use of maternity health provides insight not obtained from the quantitative analysis.

CHAPTER 5
RESULTS FROM THE DATA ANALYSIS

Introduction

This chapter presents selected results from the structured interviews. The individual respondent's questionnaires provided information on the following: socio-demographic characteristics, household characteristics, knowledge of mother-to-child HIV transmission, and the seeking/utilizing of maternity health care. In answering the question, "what factors impede or provide access to maternity health care?" I created a number of variables, guided by the literature, about how women make health care decisions. Any individual decision can be driven by more than one factor. For example, a woman might have health care insurance (which would allow her to deliver at a hospital at no cost), but decide to deliver at a home-based maternity facility for some personal reason (like not wanting to be probed clinically by strangers

Analysis

Since the two dependent variables are binary, I apply logistic regression. (Logistic regression estimates the probability that the qualitative dependent variable has two possible outcomes [Allison 1999:19, Agresti and Finlay 1997:575]).

The dependent variables are:

1. Did the informant get prenatal care (yes/no)
2. Did the informant use a birthing center (yes/no)

I used stepwise selection to determine the final list of explanatory variables in each model. Considering the sample size, I included variables that were significant up to the

0.1 level. The results of this exploration for the two models are shown in Tables 5-5 and 5-6.

In Model 1 (Table A-5) the informant attributes with statistical significance are education, partner's Islamic education, telephone ownership, knowledge of HIV transmission (in utero) and number of miscarriages.

In Model 2 (Table A-6) informant attributes with statistical significance are ethnicity, health care insurance, respondent's education, test for HIV, knowledge of MTCT(in utero), previous childbirth, education and HIV test and previous childbirth and HIV test.

The reasons explored for using prenatal care or for a particular birthing center were: the fact that the institution followed Islamic practice, distance, the presence of health care providers, cost, the presence of services and a woman's particular health problems. Tables A-5 and A-6 show the p-values and odds ratios for the nature and strength of association between the dependent and these explanatory variables. In Model 1 explanatory variables with statistical significance were distance and health care services. In Model 2, distance, health care providers and cost had statistical significance.

Section A – Socio Demographic Characteristics

Age: As indicated in Table A-1, the respondent's ages averaged 26, with a range of 16-47 years. Across the world, women younger than 20 or older than 35 experience more obstetrical complications than do women between 24 and 34. Although not statistically significant, younger women in my sample use health care services less, particularly with their first pregnancy, although more deliver in a biomedical facility. As well, lower socioeconomic status and lack of social support mean that younger women have less access to health care than older women. On the other hand, women who have more than two children use prenatal care less and take time before going to a facility to

give birth if they do decide to go at all. This relaxed attitude stems from experience of previous childbirths.

Ethnicity: The largest ethnic group in Mombasa is the Mijikenda, who comprise 30% of my sample (N=80). The second largest group in my sample, at 27% (N=70) are self-identified Arabs. Only 5% (N=14) stated they were Waswahili. Ethnic affiliation is fluid in Kenya – "situational, rational and changeable," as Cooper (2000:120) says. This has long created confusion in Kenya, particularly during census collection ((Republic of Kenya: Census 2001). For example, people of the East African coast, particularly those of mixed ancestry such as Arab/African or Asian/African, are all identified as the Waswahili by the Kenyan government (Middleton 1992). However, women categorize themselves differently from how they are labeled. Ethnicity does not play a role in seeking prenatal care (Model 1) but it plays a very significant role ($p< 0.0001$) in the choice of a birthing facility (Model 2). There was higher probability that Arabs, Asians and some Waswahili will choose biomedical childbirth facilities than the other ethnicities because of affordability (0R= 12.17) (Table A-6). Marginalized ethnic groups use health care differently from the dominant groups in societies. In observation as well, childbirth assistance by a TBA was more common among the Mijikenda, Bajuni, Jomvu, and Changamwe. In Mombasa, historically, the Arabs, Asians and some Swahilis, have had resources deprived of the Mijikenda and other smaller groups (Mkangi 1995). This has been shown as well in various other studies outside Africa, for example in Britain, Petrou and colleagues (2001) infer that women of Pakistani and Indian origin made fewer prenatal care visits than white British women. This above study claims cultural and religious beliefs as plausible factors to decreased attendance. Similar studies in the

United States have indicated that African-American, Mexican-American and Puerto-Rican women do not adequately use maternity health care (Echavarria and Parker 2001, Gardener et al 1996, McCaw-Binns et al 1995, Lia-Hoagberg et al 1990, Petitti et al 1990). These studies stated that socio-economic status plays a role in access to health care services leading to poor maternal/child health outcomes.

Education: Respondent's education is highly significant in both models, use of prenatal care (p=.001) and in choice of childbirth center (p=.02). There is a high correlation between education and better health care. On evaluating respondent's education, about (N=31) 12% of women had never been to school (see Figure A-2). Reasons for not attending school varied, the most consistent was inability to afford schooling. Although school attendance had been free for this population, parents still had to pay for uniforms and school supplies. The above 12% estimate of Mombasa Island alone was slightly higher than the whole district's estimate which was 8%. However, it is lower in comparison to the country's estimate which is 35% (Republic of Kenya: Census 2001). More than half of the respondents (N=142) 54% had elementary or primary education. The numbers decreased with secondary education to (N=89) 34% and only two women had a college degree.

The probability of use of a biomedical facility increases when the woman or spouse have higher education and subsequently increased socioeconomic status. The odds of using a biomedical facility increased as women's educational level increased (OR = 0.11) (Table A-5) and (OR=0.01) (Table A-6). Although education was a factor another component that was obvious on observation was respondent's economic status. According to literature, women's access to resources, including health care increases as

their personal socioeconomic status rises independent of their spouses and children (Handwerker 1989). Assessing women's socioeconomic status was difficult because women downplayed what they did both in trade schools as well as outside the home. More than half of the respondents (N=139) 53% stated that they were "only" housewives. Nevertheless, I observed the majority of women involved in many different home-based trades. These jobs consisted of selling jewelry, cloth material, fried potatoes, frozen lollipops, and even selling water. Some women claimed that they were in sales, (N=56) 21%, they sold items door to door or to shopkeepers.

Islamic education: In Mombasa, Islamic education is started before secular education and is not entirely free. Only 17 of the women (6%) had no Islamic schooling. These few women were either recent converts or had parents who could not afford the cost of Islamic education. Muslim clerics charge about 50-200 Kenyan shillings (about one to three U.S. dollars) per month to teach Quranic classes. Sixty-three of the 146 women who had completed grade school said that they were continuing their education. Women in this group also reported meeting with others for other non-religious discussions, such as issues involving the community, health, education and politics. Several of the women in this group were educators, conducting classes from home or involved with *madrasas*.

Islamic education was not statistically significant in either of the two models.

Marital status and union: The overwhelming majority of the respondents were married (N=257, 97%). Women who reported being separated or divorced stated that the breakup of their marriage had occurred while they were pregnant. There was only one unmarried woman and two women cohabiting under a common law relationship. Five

women stated that they had left their marital homes to go to their parents' homes after childbirth and had not gone back.

Among those married, approximately 87% (228) stated they were in a monogamous relationship, while about 11% (29) reported being in a polygynous relationship. Some women in polygynous unions stated that their husbands alternated households, dividing his days among the wives. This could, they reported, change in late pregnancy, where the husband had to be available in case the wife went into labor. Only one respondent stated she delivered at home, having been delayed in going to the hospital while waiting for the husband to return from the other wife's home The majority of the respondents were married (N=257) 97%. There was only one unmarried and two cohabiting under common law relationship. Women, who declared separation or divorced, stated that the separation or divorce had occurred while they were pregnant or during their postpartum period. Five women stated that they left their marital homes to go to their parents' homes after childbirth and have not gone back.

Section B – Household Characteristics

Health care advocates: According to the health care access literature as discussed in Chapter 1, support from spouse, family or friends plays a role in how women use biomedical health care. In this study, women's supporters and social network was assessed through investigation of the household characteristics (see Table A-2).

Spouse's education: Men had more formal education than did their partners. Male partners without formal education were (N=4) 2%, and elementary education was about (N=85) 32%. The numbers with a secondary education were (N=153) 58%, and (N=11) 4% had a college degree. Trade schools were attended during and/or after secondary schooling. Although spouse's secular education did not have statistical

significance in the logistic regression models, educated men were more supportive of their wife's use of biomedical health care (OR=0.23).

Partners with an Islamic education encouraged their wives more to use biomedical prenatal care (p=.07). Spouses with secondary secular education also had advanced Islamic schooling.

Spouse's occupation: Partner's education and occupation played an important role in affordability of health care. Approximately (N=66) 25% of the respondent's spouses were drivers. Drivers in Mombasa operate private public transportation or vans called *matatus.* The *matatus* transport commuters within the island for a minimal amount. Other drivers moreover, transported goods from the island inland to other parts of Kenya, or to other countries, such as Uganda and Congo. Approximately 35% of partners work out of the country, and visit their wives in Mombasa after a few months, a year or even after two years. Their wives stated that these visits lasted a month or two. Researchers at the Coast General Hospital reported that, they had observed that the majority of their HIV positive women had spouses who were drivers, both local and long distance. Extensive research on the spread of HIV among truck drivers has been conducted in Africa. These studies explain men's high risk sexual behaviors with prostitutes at truck stops to and from their destinations (Rakwar et al. 1999, Nzyuko et al. 1997).

Other occupations included clerical office workers (N=46) 17%. Involvement in the local tourism business, either on a full-time or part-time basis was explained as a major source of income. Odd jobs to supplement income were explained as a survival approach needed at a time of inflation and a poor economy.

Adults in the household: The number of people in the household played a role in the acquisition of health care. The majority of the respondents lived in nuclear households (N=169, 64%). About a third (N=87, 33 %,) had in their households three or more family members that is extended family. In the survey there were some respondents who reported living with sharing the household with many in-laws, up to four brothers-in-laws and their wives. Advice and decisions about health care in such households was complicated. As stated by one respondent, "I ask my husband where to go for prenatal care; however my fellow sisters-in-law also help me make decisions. But our mother-in-law has to approve before a final decision is made"

More than half of the respondents (N=136, 51%) stated they consulted their husbands on when or where to initiate prenatal care and choice of a birthing center. A few (N=39, 15%) made their own decisions, while the remainder consulted their mothers, in-laws, or friends.

Women who lived with their in-laws stated that they felt obligated to seek advice from their in-laws before making final decisions concerning health care. One respondent said, "after all I now live with them, they are like my parents. I have to include them in all decisions".

On a few occasions, women complained that their mother or sister-in-laws were not as sympathetic as their own female kin. One informant protested, "My mother-in-law left me in labor for two days before my mother came to escort me to the hospital". I observed that a majority of women's mothers were involved in caring for their daughters while in labor and after childbirth, nonetheless the husband and his family had the final word on decisions.

Medical Insurance: Respondent's with medical insurance comprised a quarter of the participants (N=69 26%). Availability of insurance had marked statistical significance (p = .0008) in Model 2. Women with higher income (whether their own or from spouse/family) were more likely to have medical coverage than were those with lower incomes. Medically insured women had access to biomedical prenatal care facilities and could afford to deliver at hospitals (OR=0.28). Even so, a few such respondents complained that they did not use private hospitals. Some said that the majority of the hospitals demanded user fees before rendering services. The government run national hospital insurance fund (NHIF) was not trusted by many hospital accountants and physicians for timely reimbursement. Respondents also asserted that the NHIF and other insurance companies took too much time to reimburse them. Employer sponsored private health insurance for workers were one of the primary sources of coverage. Among the private sector firms, employers that offered insurance had varying premiums by industry. Respondent's reported that the majority of the employers of many firms either did not offer or could not afford to contribute to the premiums. Most of the uninsured did not have regular doctors, and moved from provider to provider in search of affordable health care.

Water availability: Mombasa suffers many of the problems one finds in most third world cities. The town's growth preceded the establishment of a solid, diversified economic base to support housing and other infrastructure. Piped water, electricity and sanitation are still inadequate and women spend a lot of their time getting water for daily use. Although water was not statistically significant in Model 2, it was a major component in health care and a time-consuming commodity when not easily available.

Unsafe water carries diseases, including typhoid, cholera, hepatitis, dysentery, amoebiasis and intestinal protozoa. Approximately one-third of the respondents had complained of suffering from typhoid while pregnant. I will discuss this issue further in the next chapter.

Electricity: The vast majority of the respondents (N=244, 92%) affirmed having electricity. Power outages, however, are common in order to conserve fuel. For people who have wells and water pumps, lack of electricity meant lack of power to extract water. Women had to time the availability of electricity so that they could be home to fill water into buckets or plastic cylindrical bins for later use. At times the period of no water or electricity was announced on the radio, at times not. I observed quite a few births when there was no electricity; attendants used kerosene lamps, flash lights or candles**.**

The approximate eight percent who stated they did not have electricity had complaints about the power and lighting company not being efficient in reconnecting electricity after disconnection.

Car ownership: Thirty-three (12.5%) women stated they had a car, but cars (or lack of it) were important for all women when they needed to go to the hospital in a hurry. A couple of home births occurred due to lack of transportation to take a woman to the hospital. Car possession whether private or of companies were requested to transport neighbors and friends to and from the hospital. Doing favors to transport the sick to hospital was an everyday occurrence.

Telephone ownership: In the questionnaire, (N=175, 66%) of women reported they had mobile telephones. Telephone ownership was a significant (p= .01) predictor of a woman's using prenatal care services (OR=0.16). Some women stated they would rather be without other household necessities but have enough minutes on their phones.

Even street vendors who could barely read or write had mobile phones. A few interviewees who reported not having a phone stated that their husband or other family member in the household had one.

Respondents with phones used them to inquire about health care providers and services from others who have been to them. Some women reported going to a clinic and being told to return another day because the blood pressure machine or the hemoglobin testing instrument was not working. Women who had mobile phones said that they would call ahead and make sure that there was a physician on duty or that certain services could be performed. Telephone possession also increased convenience in making arrangeme with relatives, friends or business acquaintances, providing time to attend the clinic fo prenatal care. Mobile phones are not cheap. However, as the numbers indicate, women value their phones greatly.

Section C – Knowledge of Mother-to-Child HIV Transmission (MTCT)

The Kenyan government in conjunction with world health bodies has done major campaigns to promote HIV/AIDS prevention and transmission. The vast majority of respondents (N=249, 94%) stated their awareness of MTCT. Less than five percent acknowledged being uncertain of modes of transmission, while less than two percent declared being completely unaware (see Table A-3).

Also, the vast majority of women (N=245, 93%) (Figure A-3) confirmed that the media was their main source of information. While conducting this study, I heard daily public service announcements about HIV transmission, informing the public on the importance of prenatal care and the possibility of MTCT. Information about HIV/AIDS was also present in the newspapers almost daily.

Women could check more than one source of information for this question and health care providers were listed by 113 respondents (43%). Various clinics held teaching sessions with prenatal care attendees and informed them about MTCT. Posters were evident in almost all clinics and hospitals.

In addition, women aged 16-25 reported getting information about HIV transmission from schools. A few of these respondents stated that they belonged to HIV/AIDS advocacy groups initiated from high school.

Only 41 women (16%) acknowledged open or informal discussions about HIV awareness, let alone MTCT. Indeed, open discussions about HIV spread and preve were never without reservations—such is the stigma and shame attached to the dis Many women who are aware of MTCT are aware all three modes of transmission: in utero (N=207, 78%), during childbirth (N=185, 70%) and while breastfeeding (N=160. 60%). Women's response regarding MTCT in utero was significant (p=.03) in Model 1. Similarly, in Model 2, (p=.0001) the probability of a woman attending or delivering in a biomedical birthing center increased if aware that she was HIV positive (OR=0.19)(Table A-5) and (OR=0.22)(Table A-6). Though radio messages educated the public on the importance of prenatal care and HIV testing while pregnant, the messages were not specific about the three modes of transmission. Respondents may have been aware of transmission during childbirth, but they did not say that it was important enough for them to deliver in a level 2 or 3 hospital where there can be MTCT prevention.

Prenatal HIV testing: Prenatal HIV testing and screening has been recommended for every pregnant woman by the World Health Organization. Over 70% of respondents reported being tested for HIV were (N=189). HIV testing was highly

significant (p=.01) in the model for choice of a birthing center. The combination of increased education and having been tested for HIV is significant in the model (p=.03) (OR=1.11). That is, women who had increased secular education and had an HIV test chose a biomedical birthing center.

In this study there was no confirmation whether those tested went back for results, or whether the results were positive or negative. However, according to the literature, and from my own observation, the majority of women tested for HIV do not go back for results. In addition, lack of follow-through, particularly in a poorly established health care infrastructure, leads to lack of counseling, diagnosis, and treatment for those how are HIV-positive. This was evident in both the clinics and hospitals in Mombasa.

Obstetrical Characteristics

Number of children or parity: Previous childbirth experiences both good and bad played a role in how women accessed maternity health care. Women with previous childbirth formed the majority of the respondents at (N=166) 63%. There was marked significance (p=.0001) in previous childbirth and choice of a birthing center, but not in use of a prenatal care facility. First time mothers, plus women who have had more than five pregnancies are associated with using non-biomedical facilities (OR=0.29). First time mothers mostly belong in the younger age group of 16-25, have lower socioeconomic status, and at times lack the skills in dealing with health care providers. I observed that the experienced mothers utilized social support more from their families and the community, and had more experience in dealing with health care providers.

The combination of previous childbirth and HIV testing had a marked statistical significance (p=.0009) in Model 2 demonstrating that the probability of a multigravida who had had an HIV test delivering in a biomedical facility increased (OR=2.98).

Number of miscarriages and/ or stillborn: Women who had experienced bad obstetrical outcomes in a previous pregnancy or pregnancies utilized maternity health care early and frequently. This has also been documented by Ivanov and Flynn (1999) their study of bad obstetrical experiences and use of prenatal care. Approximately (N=35) 13% of respondents had had one or more miscarriages. Most of these respondents had up to 14-16 visits, compared to the average of seven (OR=0.58). Fear of losing another fetus prompted women to seek prenatal health care more consistently after a previous bad outcome (p=.03). Women, who had a stillborn and had not attended prenatal care, blamed themselves for the loss, stating that they understood that a biomedical facility could have provided other options of care.

Section D - Utilization of Maternity Health Care Services

Prenatal care utilization: As is often the case in developing countries most of the women in this study initiated prenatal care well into their pregnancy—after the fourth month of gestation (Figure A-4). Despite this, 68.3% of them (N=181) (Figure A-5) had more than six visits, which is considered adequate in most circumstances, (N=20, 7.5%) had exactly six visits. Still, 21.5% (57) had less than six visits were and 2.6% (N=7) had no visits. Reasons for inadequate or no attendance included lack of money to pay for services, not having childcare, or simply not having problems with the pregnancy. To further investigate causes that assist or impede the use of health care services, I

questioned women whom they consulted for advice in making maternity health care decisions.

Advisors: Informal advisors play an integral role in health care across the world (McKinlay 1973, Janzen 1978, Feierman 1981). Over half (N=136) of the women reported that they consulted their husband in deciding on whether to initiate prenatal care, especially if money was needed to pay for the services or if permission was needed to leave the household. Husbands were also consulted if they knew about health care providers or could provide transportation.

Other family members were consulted, particularly when there were complications to the mother or the baby, or if women needed help with hospital costs. Consultations, however, could have bad outcomes. One woman reported that she had had prolonged labor, and that the obstetrician had told her and the family that she had a big baby and a narrow pelvis, requiring a cesarean section. The husband consulted with his mother and mother-in-law to decide about surgery. They disagreed about it, and while they discussed it, the child was stillborn.

Choice of a childbirth delivery center

There were five areas itemized in this study of where women chose to deliver their babies (Figure A-6). These are:

1. Home with no assistance
2. Home with a traditional birth attendant (TBA)
3. Home with a clinician (nurse/midwife/physician assistant)
4. Level 1 biomedical facility (these levels are explained in detail in chapter 3)
5. Level 2 biomedical facility
6. Level 3 biomedical facility

Starting with the top levels which are 2 and 3, these hospitals were equipped with urgent care services to care for both mother and baby. These hospitals had the capacity

among others, to care for an HIV positive mother and prevent MTCT to the baby. Respondents who had attended such facilities were (N=118) 45%.

The level 1 hospital was almost similar to a woman delivering at home with a clinician. Approximately (N=110) 42% of respondents used this facility, which dic have the capability to prevent MTCT or mortality. During the interviews, the clinic level 1 centers stated that they referred women with complications (HIV positive patients included) to the level 2 or 3 hospitals. However, they sometimes received referred women because they complained of hospital costs. In the next section, I will explain a woman's other reasons for choosing health care facilities.

Some respondents, (N=34) 13% asserted preference of a home environment for childbirth, with a traditional birth attendant (TBA). Most neighborhoods had a TBA or were close to a clinic where medical personnel were at times called to assist with a delivery.

Reasons for using a facility for prenatal care or childbirth

Islamic medical institutions: Women had many reasons for choosing a facility. I asked women to choose the five main reasons for why they would go to a particular facility. The most commonly repeated reasons were itemized 1 to 5, (Table A-4) number one being their most important reason, while five being the least.

Since this study was conducted within the Muslim community, I expected the majority would prefer an Islamic run medical institution. I included this assertion as one of my hypothesis. As stated earlier, only (N=31) 12% stated that they would make religion as a deciding factor, there was no statistical significance in both models. Support of an Islamic establishment or *muungano wa Waislamu* (Islamic solidarity) was not a reason of using a facility. The three Muslim - run hospitals were built with the intention

of providing access to appropriate health care to those poor Muslims who could not afford the private hospitals, and also as an alternative to government – run hospital Women often complained about their dissatisfaction with the above institutions wh were mainly due to mismanagement and cost of attending them. Respondents who stated using Muslim-run facilities agreed that they used them for *tohara* or hygienic cleanliness. Another factor named was *stara,* although this can simply be translated as the upholding of one's respect and virtue, the context enforces a health care provider the moral and spiritual obligation to protect and honor the individual in their care.

Distance: Distance to a clinic or hospital has been described as a main factor hindering women from accessing health care. In an urban area like Mombasa, where transportation and health care facilities were not far from each other, approximately (N=83) 31% of respondents reported distance as a reason for using maternity care. However, distance had a statistical significance (p=.09), with the odds increasing by 74% that a respondent made a choice of a prenatal care facility depending on distance.

There are numerous health care facilities at close proximity around Mombasa. Transportation with *matatus* (transportation vans) was constantly available at a cost of Ksh.10 (equivalent to a United States penny). Women did not have to travel far to receive care, however, when I questioned some women who had traveled further away from centers closer to home, they stated that they were in search of either better facilities, health care providers or shopping for affordable care.

When choosing a birthing center, there was statistical significance (p=.06), with the odds increasing to almost 78% that a woman would choose a center due to distance.

Women chose facilities for childbirth closer to their homes, in the event that they went into labor at night, where transportation may not be available.

Health care providers: Health care providers influence women's decision of where to go for care. Respondents affirmed that they moved to different providers search of good care. The physical and verbal abuse of women during pregnancy an childbirth has been documented by Allen (2002), Fon et al. (1998), Okafor and Rizzuto (1994) and Sargent and Rawlins (1991). Interviewees who chose attendants as reason of choosing a health care facility were (N=115) 43%. There was no statistical significance in model 1, indicating plausible flexibility while a respondent was pregnant. However, in choice of birthing center there was statistical significance (p=.03) with the odds highly increasing at 82% that health care providers was a major factor in choosing where a women delivered their babies.

Cost: Shopping and paying for affordable maternity health care was a struggle for many women in this study. Although only (N=101) 38% stated that cost was a factor while they searched for affordable prenatal care, with many acknowledging that it was a major factor for choosing a childbirth facility. Most women commented, *ikiwa sina pesa sendi clinic* (if I don't have money I don't go to the clinic). Payment for preventative care was a reason used for not using services, especially when other pressing financial needs took precedence in the home.

Almost all the women (N=99%) did not have home-births, signifying that although cost was a factor, compromises were made to pay for services or sometimes women were not paying for services. In choosing a birthing center there was a high probability

(p=.0001) that cost was a major factor, with the odds being high that a woman will choose a birthing center depending on affordability.

To deal with payments after birth, interviewees stated that other family members were requested to help with contributions (*mchango*) to help pay for childbirth costs. Women in most hospitals were retained after postpartum discharge until the bill was p leaving husbands to raise funds to pay before the mother and baby could be released. Nurses reported that at times women sneaked out of the hospitals leaving their babies behind, later to return to claim their babies after paying the hospital bill. Attendants at the home-birthing centers complained that they had to force women to pay a deposit before childbirth with the fear that, that would be the only payment to be received after the woman and the baby left. The balance with some women would be given in installments, however with some there would be none.

Health care services: The choice of health care services went hand in hand with health care providers, With the majority of the respondents (N=186) 70 % agreeing that they chose a facility according to services provided. These services included the interaction with providers, and the efficiency of the establishment in terms of delivery of care. Interviewees stated that waiting period to be seen by a provider was important, availability of medication, functioning equipment and laboratory. Although majority of the respondents stated these services were very important, about (N=147) 55% of them delivered in childbirth centers that could not provide emergency life saving services for them or their babies. Millions of women globally have babies without problems, however when there are obstetrical complications they are immediate and require swift action. Obstetrical emergencies that could cause maternal morbidity are hemorrhage, obstructed

labor, sepsis, and eclampsia. Since this study also assessed women's measures to prevent mother-to-child HIV transmission, any of the 55% of respondents who might have been HIV positive would not be in facilities that could prevent MTCT.

In both models there was no statistical significance in choice of health care services as a reason of choosing a health care facility.

Health problems: I inquired if women chose a health care facility depending on health problems particularly in pregnancy. The major health problems mentioned during pregnancy, although some are not pregnancy related were anemia (due to diet and/or malaria), malaria, typhoid, pregnancy induced hypertension or pre eclampsia, and vaginal discharge (due to reproductive or sexual transmitted infections). Respondents who chose facilities due to any of the above health problems were (N=18) 7%, plus there was no statistical significance in both models in women's responses to how they managed any of the above.

CHAPTER 6
ETHNOGRAPHY OF PREGNANCY AND CHILDBIRTH

Introduction

In this chapter I provide women's narratives of their recent experiences and explore what they see as normal and what they see as illnesses in pregnancy. In addition, I include societal and cultural factors that possibly delay women from starting prenatal care. These narratives reveal things about the use of maternity health care that are not captured by the questionnaire data. From those data, Islamic institutions were not significant in women's preference of a childbirth facility. Yet, more than half (N=144, 54.3%) of the women delivered in centers where the caregivers were mostly Muslim women. However, when variables that had statistical significance, such as cost, health care providers and distance of the centers are considered, it is not surprising that women deliver in these facilities, because they are cheaper, and closer to the neighborhoods.

Menstruation and Puberty Rites – Lessons On How to Safeguard Fertility

Pregnancy is a blessing (*baraka*) with prayers given constantly for the wellbeing of the mother and baby. Good and bad outcomes of the pregnancy are God's will or one's destiny *(majaaliwa ya Mwenyezi Mungu).* As explained by Sered (1994: 188) "conception, pregnancy, labor and delivery and the postpartum period may be fraught with uncertainty, fear, danger, deep relief and a sense of wonder". Women left the outcome of their pregnancy to fate and in "God's hands" (what will be, will be). This fatalistic attitude was repeated and repeated by almost all the women. Women are cautioned to avoid early claims of a pregnancy, which could bring bad luck or harm from

the evil eye (*hasad*) of others and cause a miscarriage (see Chapter 3). In addition, older women who have seen many pregnancies not reaching term, caution younger women not to rejoice during pregnancy until a normal healthy baby is born. Secrecy and pregnancy are societal concepts taught to protect the mother and fetus, from possible mishaps and from those who are barren who might cast an evil eye out of jealousy on the pregnant woman.

Thus, other than the spouse and the women in the very immediate family, the beginning of a pregnancy is not announced. One woman stated "I did not tell anyone that I was expecting. They confronted and asked me when I started showing". Secondly, announcing a pregnancy is a public statement of sexual intercourse, which is against the codes of public modesty. These concepts are important in understanding why women start prenatal care late—that is, until they are physically showing, after the fifth month—or not at all.

The beginning of menstruation or puberty (*baleghe or kuvunja ungo*) is tied to the start of fertility. Being fertile means fulfilling the role of being a woman. A young woman is taught not to discuss the beginning of menstruation with others for self-protection. This code of secrecy about matters relating to fertility continues to pregnancy, and childbirth. The code is so important that formal lessons, with a special teacher (*somo* or *kungwi*) are purchased for the initiate (*mwari).* Codes of public modesty for women are taught from childhood in all societies. An old initiation ritual to womanhood, called *unyago*, was studied by Strobel (1979). Caplan (1976) describes a comparable practice among the Swahili in Tanzania. Others who have also examined reproductive or female initiation rites similar to *unyago* are Brown (1963), Kitahara (1984) and Schlegel and

Barry (1979). *Unyago* was a big societal celebration performed with seven days of drumming (*ngoma)*. It started at the beginning of a girls' first menstruation to the last day when she is publicly bathed (*kuoshwa*) before "coming out" and being presented to society as ready for marriage.

Remnants of this ritual are still found in Mombasa. An older female relative or neighbor provides instruction, for a small fee, on hygiene during menstruation and how to ritually bathe afterwards. The *somo* teaches the *mwari* how to use the menstrual cloth and the instructions are given for the first three months of menstruation. Today, the *mwari* is taught how to use sanitary pads and, more importantly, how to discretely dispose of them. Lessons include on how to keep track of the menstrual cycle and how to purify the body after the menstrual period (*tohara)*. The *somo's* lessons emphasize secrecy in hiding the menstrual cloth or pad (including from a husband), as well as instructions on a woman's duties in the house and community and on how to be a good wife and mother. The *somo* is responsible for her *mwari's* behavior both in the community and in her marital home. The teaching between *somo* and *mwari* is kept a secret, with the *mwari* not sharing the teachings, even with age mates unless they have the same *somo*. The *somo* plays a major role when the *mwari* gets married; she is called the "other" mother. She may be included in dowry negotiations and is the first called to settle marital disputes when they arise. During childbirth and the postpartum period the *somo* would be called to assist the new mother and baby. The somo would expect her *mwari* to be brave and not embarrass her during labor and childbirth. Screaming or crying out in pain would not be acceptable behavior. Furthermore, complaining about the hardship of childbirth is not encouraged.

The new mother has to be grateful and thank God (*mtu hushukuru Mungu*) for the safe passage to motherhood.

Cultural practices in preparation for womanhood are ubiquitous, but the demands of both Islamic and secular education make keeping up with these cultural norms difficult. Although all Muslims practice *tohara*, the puberty rite of *somo/mwari* is practiced mostly by the Mijikenda and some Waswahili. The Arabs and some Waswahili, on the other hand, practice *kutawisha* which is the seclusion of the girl at puberty and the reinforcement of modesty (*heshima*). Modesty traits include bashfulness, humility, diffidence and shyness. The initiate (*mwanamwali*) is enjoined to practice purity, fidelity and chastity, which is tested on her wedding day (Antoun 1968). At puberty, the *mwanamwali* cannot be seen or heard in public. When out in public she has to be escorted and covered, wearing the outer black garment that conceals her body from head to toes (*bui bui* or *thaub*). Secular and religious schooling out of the home may be discontinued. I was informed that the teaching of codes of modesty for an Arab girl begins earlier with genital cutting, a variant form of clitoridectomy, performed as a purification rite. Female circumcision is a code of modesty increasing a girl's possibility of marriage (Yount 2002). Morsy (1993:84) also explains a similar practice in Egypt as purification (*tahara)* performed at twelve years of age. The age of female genital cutting in Mombasa varied between ages two to twelve years, or just before puberty with similar intentions of safeguarding women's honor or assuring the girls' chastity before marriage. The sides of the clitoris are excised, without the complete removal of it. This is classified as a Type 1 form of female circumcision (WHO 1995). Female genital cutting in many parts of the Muslim world is considered *sunna* (which denotes the sayings and doings of the prophet

Muhammad as described in the stories after his death) though it predates Islam and it has no Quranic reference (see Gruenbaum 1996, Johnsdotter, 2003, Morsy, 1993, Yount 2002).

The strength of the concept of modesty for women cannot be overestimated among Muslim women, and particularly among Arab Muslim women. Allen (2002:165) reports that Arab women in Tanzania also avoided early prenatal care due to embarrassment about their pregnancies. In addition, Wall (1998: 350) in his study of the Hausa-Fulani explains that the social pressure for women to "remain modest" might prevent them from seeking health care or asking questions about childbirth. Similarly, Goodburn et al. (1995) in their research of beliefs and childbirth practices in rural Bangladesh claim that Muslim women practice *purdah* (social isolation) for modesty and to conceal pregnancy because of shame attached to being pregnant.

Infertility

Infertility is the failure by a couple to conceive after a year of unprotected intercourse. In this study I observed many women undergoing secondary infertility, defined by Odile (1983:140) as "the inability to have a child subsequent to an earlier birth after a reasonably long period". Failure to conceive often generates feelings of frustration, inadequacy, emotional stress, anger, guilt and resentment. Katz and Katz (1987: 395) explain that "infertility is a devastating problem for women in cultures where childlessness carries a strong social stigma and where children offer assurance of both personal and old age insurance". Causes and problems of fertility and infertility in Africa have been studied extensively (Agadjanian (2001), Hopkins and Revson (1979), Kokole (1994), and Odile (1983)). Women who cannot bear children are called *tasa* meaning, barren, pitied by relatives and at times ridiculed by in-laws. In contrast, the term for a

man who is sterile is "*hanithi,*" which also means homosexual. After the first year of marriage, the social pressure begins if a woman is still not pregnant with questions, such as "not yet?" or "still not pregnant?" (*je vipi bado au mbona hujabeba?*). A woman cannot conceive is encouraged by the family to choose a second wife for her husband that the new wife can have children. Children born in such an arrangement are shared by the first wife when there is a cordial or respectful first/second wife relationship. During my interviews, about one out of four women had a story of frustration due to infertility. Women provided details about their quest to get pregnant. The traditional birth attendants and the healers also explained that they had long term patients who had not conceived. Since I interviewed women who had given birth, the respondents' narratives are the result of success stories after infertility treatments. I interviewed Hamida, aged 34, after she had her third baby. She has two daughters, one 15 years of age, an 11 year old and now the new baby. She has suffered from infertility and as she explains, she was not treated by just one healer:

> My last daughter is now 11 years old. I have been unable to get pregnant until now. I went to Dr. Patel (private physician) on and off for treatment when I had money, it has been very expensive. She gave me pills to take and told me the medicine will regulate my periods (hormones). I have also gone to Mama Msena who said that my problem is *mshipa*[2] or blocked fallopian tubes. She massaged by abdomen at every visit, gave me oral liquid herbal medicine and vaginal suppositories. This treatment was not very cheap either, but better than at Dr. Patel's. Last year as a last resort, my husband suggested an Islamic healer who read the Quranic verses to remove any *hassad* or evil spirits that might be stopping me from becoming pregnant (Informant 009).

Infertility is treated through biomedical, spiritual and traditional medicine; none of which are mutually exclusive. Biomedical treatments for infertility are very expensive.

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[2] *Mshipa* is a diagnosis given to a myriad of complaints. The literal Swahili meaning of the word *mshipa* is a blood vessel, or a nerve. Therefore, pain in the legs, stomach or any other part of the body could be a result of *mshipa*. I clarified with Mama Msena that the *mshipa* she meant was of the reproductive tract.

Very few women are able to afford the procedures, which sometimes involves su
As a woman gets desperate, different remedies are sought, as the above case desc
For Hamida, it took a combination of treatments for her to become pregnant. She stated that God had not granted it to happen (*Mwenyezi Mungu alikuwa hajajaalia*) and this was the reason given by all women who had had problems with infertility. However, while women waited for God to grant them the *baraka*, they also were proactive in seeking treatments to treat their infertility problem.

While I was interviewing another respondent, a woman who had been patiently listening argued that biomedicine could not cure infertility problems that needed traditional healing methods such as spirit possession. She explained that she had been pregnant for a year, and had gone for an ultrasound, only to be informed that a fetus was not seen. She was adamant that she was pregnant and she assured me that when I return to Mombasa after a year I will be shown the baby. This condition is biomedically known as pseudocyesis or pseudopregnancy (Small 1986). It is believed in medical science as psychogenic in origin. However at times, following a cure the woman can get pregnant and have a healthy baby. In a national survey study, Coreil et al. (1996:424) found pseudocyesis, or "arrested pregnancy syndrome," common in Haiti. Murray (1974) reports that women in Haiti (or their partners) who self-diagnosed as having a prolonged pregnancy were in a state of "perdition". Murray hypothesized that the condition is a culturally sanctioned face-saving mechanism for infertile women in a setting that places enormous pressure on women to bear children. Women in Mombasa who stated they were in such a state underwent diagnosis by a healer, who confirmed the pregnancy. Two such women, whom I interviewed, had previously had healthy infants. Presently, they had

irregular periods, their abdomens were distended and they even claimed that they f
fetal movement. This form of "hysterical pregnancy," (Murray 1974) involves exte
symptoms with the absence of a fetus. Mama Msena and other healers stated they had treated many such pregnancies with success. Similarly, In Haiti, the "goal of treatment for a woman in perdition is to reinstate the growth of a child which has been trapped in a woman's womb" (Murray 1974:67).

Healers treat infertility through regulation of women's menstrual cycle, and I was informed by some of them that one of the major causes of the problem is a cold womb (*uzao umepata baridi*) or a closed womb (*kizazi kimejifunga*). One of the remedies for this was the application of a special remedy on the man's penis before sexual intercourse to warm up or open the uterus. Infertility was treated by male and female healers for both men and women depending on the cause of the problem. Healers that were treating the women stated that they simultaneously treated the partner. Possession by disgruntled spirits (*ruhani*) that might affect either partner was also given as a reason for infertility. Rukia, a 28 year old who had just delivered her third baby explains:

> I delivered my first child, six years ago but she had already died in my uterus. The second one was three years ago and he died after one week after birth due to diarrhea and vomiting. I was not taking anything to stop me from getting pregnant, but I was taking too long to conceive. I initially went to the hospital to find out why I could not have a baby after a year. They took me to the theatre (operating room) and cleaned my uterus (dilatation and curettage) (*wakanisafisha uzao*). I still did not conceive, after five years of seeing both Western and traditional healers, I went to see Mzee Ali who is both a traditional and Islamic healer. He informed me that I was possessed with a male spirit (*ruhani mume*) who was unhappy because he was not invited or informed of my marriage and my wish to conceive. I was given herbal medication and ordered to wear a ring with a sapphire stone and an emblem of a mosque. I had to provide two chickens, a black and white one, plus a goat. I became pregnant six months later and this is the result (showing off the son) (Informant 067).

Pregnancy Loss

Spontaneous abortion or miscarriage is the loss of products of conception before the twentieth week of pregnancy. The body rejects a fetus that is not developing normally in about 25-60% of cases. *Kuharibu mimba* in Kiswahili, or miscarriage, translates as something in the uterus being spoiled or ruined. Women explain miscarriage or the death of a baby as also God's will (*Mwenyezi Mungu amejaalia*). The first miscarriage may be overlooked. However subsequent losses are considered to be the act of malevolent spirits, or angry animate forces or *hasada* from oneself or other people. To prevent miscarriage or protect the pregnancy, a special herbal or spiritual remedy is given to the expectant mother. This preventative treatment is called *nyongo* or *nyongoo*, performed mostly by the Mijikenda. *Nyongoo* treatment is shared by the other groups when a woman is desperate to protect a pregnancy and preserve a wanted baby. Women who are advised to start *nyongoo* preventative treatment and do not are suspected of not wanting the pregnancy and sometimes ostracized. The treatment is given either before conception or after. However, according to a healer, the appropriate time is between the sixth and seventh month of gestation. All Mijikenda women are advised to receive *nyongoo* treatment. Mama Mishi, a healer, argued that many secular and religiously educated women are not receiving *nyongoo* treatment. She argues that this is the reason why there are many complications related with pregnancies. When some of the women do not go to healers for the treatment, a family member, mostly the mother or mother-in-law, will get the treatment for them. Women who have had problems with infertility, difficult pregnancies or stillbirths are more likely to use *nyongoo* treatment and take precautions for a healthy obstetrical outcome.

Women who start premature labor are treated at home by TBAs. Bi Zuena (a TBA) explained that there are herbal treatments to strengthen and help the baby mature, plus close the cervix until the appropriate time for childbirth. She advised that her treatment to stop a miscarriage or premature labor was boiling a type of seaweed (*mnafisi*) and giving the liquid to the mother to drink.

Perceptions of pregnancy

The Kiswahili term for pregnancy is *mjamzito*, which means one carrying a heavy load. This also insinuates that the one carrying the heavy load needs help and sympathy. It is not unusual to hear older women reprimanding husbands or other family members for not helping a pregnant woman, particularly in the last trimester "Can't you see that she is carrying a heavy load?" "*Humuoni mwenzako mjamzito*?" Attention for pregnant women does not only come from the husband, but also from the extended family. Pregnancy does not stop women from continuing with their daily chores. However assistance is given when the work is strenuous or the woman is tired. On the other hand, women who use pregnancy as an excuse not to perform their regular chores are also quickly reminded that pregnancy is not an illness (*mimba si ugonja).*

The concept of carrying a heavy load is the reason women pursue massage therapy for body aches and pains. Approximately half of the respondents in this study stated that they had been to a masseuse at one time or another during the pregnancy to relieve lower back pain, pelvic and general body discomfort. These discomforts are normal in pregnancy as musculoskeletal changes occur with the growing fetus. Massage therapy during pregnancy is beneficial since it increases blood circulation and relaxes muscles. However abdominal and sacral massage should be avoided in the third trimester (Tiran and Mack 2000). Women are hired as masseuse therapists and paid about Ksh. 20-100

(less than a dollar) depending on their expertise. Reference is through word of mouth on who is a good masseuse. Shopping for a good masseuse is similar to the search for a good health care provider. Women report good masseuses got rid of their aches and pains and they felt better. On the other hand, there were stories of bad experiences with inexperienced masseuses. One woman complained, “My abdomen was massaged so roughly that my baby’s position was changed, I never went back to her, but I had to find another therapist to fix the position of the baby”. Another informant stated that her masseuse was also rough and her whole body ached for a week. These concerns were voiced by many women that the masseuses were either too rough or aggressive creating more body discomfort than good, plus possibly changing baby’s position. The external manipulation of a baby’s position in utero is performed as well in hospitals. This is when a baby’s buttocks present instead of the head in the birth canal.

Women furthermore explained that they went for massage whenever they felt that the baby was sitting too low, or in the wrong position. Women were very concerned about having the baby in the right position. However women did not go to health departments or hospitals for such complaints. Traditional birth attendants also practice massage therapy. During the massages, TBAs leisurely communicate with their clients, to know more about the pregnancy, family life and issues that might be affecting them. They might also provide herbal oral medication for pregnancy related discomfort. A TBA explained that proper massage does not harm the mother or the baby, but provides relief; nevertheless she looks for further problems and refers the woman to the hospitals when necessary. She added that asking women to go to the hospital before massaging them would not be providing the proper care, because it would upset the woman or push her to

seek another therapist. In many instances, there is social pressure for women to avoid seeking biomedical care without first trying home or traditional therapy. Over the counter medication to relieve discomfort, such as Paracetamol (equivalent to Tylenol) was used. Some women explained that massage therapy was not their first choice. In an interview Khadija a 39 year old mother of two stated:

> I was not feeling well, I was told by my grandmother to go to Mama Dogo (a healer) because of excessive vomiting and not feeling well. I was now in my seventh month and I was loosing a lot of weight. Instead I went to see Dr. Mala (a private doctor) who admitted me in the hospital; they gave me intravenous fluids and other medicines. After I left the hospital, I now complained to my grandmother that the baby was very low (*mtoto ameshuka*). She sent for Mama Dogo a masseuse to massage me and lift the baby (*amuenue mtoto*). Mama Dogo made me some soups and porridge which she added herbs to give me strength (Informant 055).

Successful uncomplicated pregnancies are celebrated with an offering called *tangalizi.* This is done at the beginning of the ninth month. A meal that contains seven different grains is prepared and given out as an offering. The meal is divided into three portions; one given to people after prayers at a mosque, a portion is given to neighbors, and some to the poor. The seven grains chosen are; whole wheat, black-eyed peas, split peas, kidney beans, lentils, adzuki beans, and millet. These are boiled separately until cooked, and later combined, and served with grated coconut. The expectant mother does not eat the *tangalizi* since it is an offering. Underlying the childbirth rituals are traditional and religious acts that emphasize the dangers of birth and the need for divine protection (Sered 1994). *Tangalizi* is not an Islamic religious practice; however there are certain prayers (*tawasuli*) that are performed together with the offering to remove *hasad* and to seek divine intervention. The persistence of beliefs and practices which deviate not only from “normative Islam”, but also from Islamic orthodoxy as it is locally defined and

understood is common in Muslim societies, such as Mombasa, and women are the focus of the maintenance of such beliefs and practices (Ladislov 1988).

Prohibitions in pregnancy

Taboos on behavior during pregnancy appear to be attempts to curtail parental access to things or situations that may prove harmful to the child (Montgomery 1974: 160). Pregnant women are reminded that certain actions and/or foods might affect their pregnancies and ultimately the baby. Sered (1994:204) contends that for "pregnant and birthing women who are part of cultures in which individuals are not seen as controlling their own destinies, indirect tactics like rituals are appealing methods for dealing with fear, conflict, and the need for attention". Women are not allowed to tease or laugh at an individual with a deformity otherwise the baby will be delivered deformed. Similarly, they cannot hate a person otherwise the baby will be born with that person's physical characteristics. Being outdoors during dusk might expose the woman and her baby to evil spirits. Illicit sexual practice by either partner would produce a sickly baby (*mwana wa kuchirwa*).

Preservation of the pregnancy and the wellbeing of the developing fetus becomes a family affair. Food restrictions (*miko*) are enforced for those who can afford food choices. So-called hot foods, such as cassava, raw mangoes, hot chilly, honey, beef, lemon and limes, plus certain spices, such as black pepper and ginger, are forbidden for the pregnant woman. Hot foods taken in the first trimester are believed to act as an abortifacient. Manderson (1981:511) argues that in most societies, food taboos in pregnancy are "in the interest not of the mother but of the health of the unborn child and its appearance at birth".

Women, who have problems before the ninth month of pregnancy, go to healers such as Bi Zuena and women of Baluchi ethnicity for treatment. Mama Msena on the other hand, explained two types of treatments to prevent stillbirth or babies that do not grow well in the womb. Women in my sample who had delivered a stillborn went for *nyongoo* treatment or were treated for *mwajuu* (high blood pressure) as I will later explain.

Illnesses in Pregnancy

I asked women about what they perceived as illnesses that can harm them or their babies. Approximately 36% (N=93) complained about having suffered and had documented evidence of treatment for one or more of the following: pre-eclampsia or *mwajuu*, anemia (*upungufu was damu*), fever (*homa*), and reproductive tract infections (*shango*).

Pre-eclampsia: Pre-eclampsia or pregnancy induced hypertension is the development of high blood pressure with evidence of protein in the urine (albuminuria) or edema (swelling of the hands or face) between the twentieth week of pregnancy and the end of the first week of postpartum. Untreated pre-eclampsia can lead to eclampsia which is a state of coma and/or convulsive seizures. Causes of pre-eclampsia and eclampsia are unknown, although 5% of pregnant women develop it, mostly in first time pregnancies or in women with a history of hypertension or vascular disease. Women suffering from pre-eclampsia die from eclampsia, renal complications and coagulopathies (blood clotting disorders) among other severe complications. Treatment is aimed at preserving the life and health of the mother and consequently the fetus survives. Hospital management of severe pre-eclampsia is imperative to prevent eclampsia (Merck Manual 1992). In this study 5.7% (N=15) reported having been diagnosed with this illness, and

the majority of them (N=11) also received traditional herbal therapy for it. Symptoms of pre-eclampsia correlate with a local condition called *mwajuu.*

Mwajuu, as explained by the healers, is characterized by symptoms of swollen feet, face and hands (*kufura migoo, uso na mikono*). The pregnant woman complains of not feeling well (*asikia vibaya*) and has decreased urinary output in the advances stages. Traditional herbal remedy is provided by specialists and not all healers treat *mwajuu* although they may provide the diagnosis. Bi Riziki at the Majengo market was the healer consistently mentioned as having the treatment for *mwajuu*. I was informed that the treatment was not complicated. However, finding the right herbs, consistency and course of therapy to be followed needed a healer with experience and knowledge. Bi Riziki explained that the main ingredient in the herbal treatment was to increase diuresis or removal of body fluids in order to decrease the swelling and lower the woman's blood pressure (*presha*). I further inquired when she thought the woman should go to the hospital due to advanced illness. Bi Riziki said that the best time is when the patient could no longer walk to see her for further consultation. She does not do home visits. Many of the interviewed had a lot of faith in *mwajuu* herbal therapy. A few even s that hospital treatment was not effective, that this illness requires traditional healin *"ugonjwa huu wataka utabibu was kikwetu"*. This belief at times resulted in complications as the following respondent, Amina explains:

> I was not feeling too well at 11a.m., my mother escorted me to Mwembe Tayari health department for a check up. After they checked me, the nurse told me that my blood pressure was very high and my urine test was not normal. I was referred to Coast General Hospital (CGH). My mother advised me to go to Mama Mishi (a TBA) and a family friend to see if I had *mwajuu,* plus get treatment from Bi Riziki. Mama Mishi agreed that I needed mwajuu treatment, but by 4p.m. I was feeling really bad. They got me a taxi and took me to CGH, there I started having seizures by 6p.m. and became unconscious. They tell me that they took me to the operating

> room and removed the baby (cesarean section), but the baby died. She was a baby girl. I stayed in intensive care and regained consciousness three days later (Informant 084).

Amina is a 28 year old woman who was expecting her second baby. She had had 10 prenatal care visits and explained that the main reason for not going straight to the hospital as advised was her mother's lack of trust of the biomedical facility in treating *mwajuu*. She also complained that she was ambivalent about going to CGH due to the hospital's reputation of having rude health care providers and poor care. I further inquired about her experience during her hospital stay. Amina was relieved that her perceptions did not match the care she received. The hospital staff was not rude to her, although she complained of the hospital cost. The decision not to follow the referral recommendation had an unfortunate and grave consequence. Barnes-Josiah et al. (1998: 981) explain that high rates of maternal mortality in third world countries are due to delay in "deciding to seek appropriate medical help for an obstetric emergency, reaching an appropriate obstetrical facility and receiving adequate care when a facility is reached". Amina to the loss of her baby as God's will (*Mwenyezi Mungu hakunijaalia rizki*). Amina among four women I interviewed who had experienced extremely bad obstetrical complications.

Some cases of preeclampsia did not have similar bad outcomes as explained by Samia, also aged 28 years old after her second childbirth:

> I was diagnosed with pre-eclampsia after my first pregnancy. I did not think I would have the same problem again. I went to Spaki maternity home, where the nurse referred me to a private obstetrician – although expensive, I agreed. The doctor advised me to stay at home, not to do any housework, but to rest in bed and gave me high blood pressure medicine, which I took. My neighbor visited me and gave me *mahlab* (an Arabic home remedy for high blood pressure); I used this three times a day. Mama Nuru (a healer and TBA) was brought to massage me for backache, and when she saw my swollen feet, she suggested that I should be given *mwajuu* medication. Mama Nuru went to Bi Riziki and brought the treatment. I

> took all the medicines and in the last month of my pregnancy I moved to my mother's house to prepare for delivery. I delivered a healthy baby at the neighborhood maternity home, it has a name but I cannot remember it. The hospitals were too far from my mother's house (Informant 064).

Samia's story was consistent with many others that I heard in the use of different healing remedies to treat one ailment. Since she had a history of preeclampsia, a biomedical recommendation would have been for her to deliver in a hospital under medical supervision to prevent further complications. However, she made choices that were comfortable for her in her environment and in her condition.

Anemia: Women complained of feeling weak due to "decreased blood" (*upungufu wa damu)*. I interviewed women who had been diagnosed with anemia and were being treated. Iron deficiency anemia is responsible for 95% of anemia in pregnancy. Normal iron values decrease during pregnancy. Iron supplements are recommended in oral iron preparations such as ferrous sulfate tablets. Pregnant women are advised to increase foods rich in iron in their daily diets. During the interviews, approximately 6% (N=17) of women were diagnosed with severe anemia. Quite a number of respondents stated that they had symptoms of anemia, but had not been tested. Lack of diagnosis and records prevents our knowing the effects of anemia in pregnancy in third world countries. Women with severe anemia in pregnancy have increased incidence of infant mortality (Marchant et al. 2004). Symptoms of anemia consist of weakness, ease of fatigue, dizziness, headaches, and ringing in the ears. A woman's health status particularly with anemia plays a major role in pregnancy and in childbirth outcome. One causative factor of anemia in women is nutrition deprivation; however malaria is also a major cause in Mombasa. TBA's and healers also provide nutritional herbal supplements to assist increasing women's iron levels. As explained by Saida:

> I was tired all the time, even after just taking a shower, this was in my fifth month of pregnancy. I went to Sayidda Fatima hospital where I was getting prenatal care. I was given iron pills, they were making me nauseous (*lakini zilikuwa zikinichafua roho*), so I only took them some times. I drank milkshakes of milk and dates, or milk and egg yolks; I was told this increases blood and would increase my strength (*maziwa na mayai au tende yaongeza damu na nguvu*). But I developed breathlessness and at the hospital they said I would need a blood transfusion before I had the baby. I became scared and I went to see Bi Zuena who gave me *sikijabili* which I had to drink a quarter of a teacup three times a day. When I had the baby, I was not very strong, but they did not have to give me any blood. I still feel weak when I do heavy work but I still continue with *sikijabili* (Informant 112).

Saida had suffered from malaria and typhoid with this pregnancy, requiring hospital admission. When I met her she was still pale and struggling with daily household chores, which she explained she had managed well before the illnesses and the pregnancy. She was among many informants who stated that they avoided blood transfusion when possible, trying other oral medications from hospitals or home made remedies.

Bi Zuena was the main healer women went to for herbal iron supplement. She prescribes a syrup she calls, *sikijabili* (a combination of raisins, tamarind, brown sugar, fennel seeds and cinnamon powder). Bi Zuena does not stop women from continuing with the iron pills given at the hospital. Women, who prefer *sikijabili*, complained that the iron pills gave them constipation and nausea. I inquired from the clinicians if there was a substitute for the iron pills. A multi-vitamin, Fefol was substituted for a slightly higher price. A bottle of *sikijabili* was more expensive than Fefol, or iron pills, although more accepted by some respondents due to the lack of possible side effects.

Fever: Fever is defined quantitatively as a rise in body temperature above the daily normal variation of greater than 37.8 degrees Celsius (100 degrees Fahrenheit). Fever can be caused by infectious or non-infectious disorders. On the other hand, *homa* is a rise of body temperature that can be the result of fever but may also be the result of a common

cold. *Homa* may involve feeling very hot or very cold, especially with shivering, headaches or general malaise. *Homa* can be caused from inside one's body or from outside, including "bad air" (*upepo mbaya*). Most respondents complained of having had *homa* at one time or another in their pregnancy. The two main illnesses reported as the cause of fever were typhoid and malaria.

Twenty-two women (8.3%) reported having been diagnosed and treated for typ fever and/or malaria. I report these numbers together because most of the respondent suffered from both. Typhoid fever is a systemic infectious disease caused by Salmonella typhi, and is characterized by fever, prostration, diarrhea, abdominal pains, and a rose colored rash (Dildy et al. 1990: 274, Sadan et al. 1986:807). The typhoid bacillus is endemic in areas where sanitary measures are inadequate and is spread through a fecal-oral cycle through inadequate hand washing, contaminated food, flies and water. As explained in the previous chapter, women in Mombasa spend a lot of time and energy in the collection and preservation of clean water. Pregnant women who cannot handle the strenuous task of collecting and boiling water at times succumb to typhoid fever. Treatment for typhoid is with antibiotics. Pregnant women who develop typhoid fever are at high risk for obstetric complications such as spontaneous abortion or premature labor (Zenilman 1997: 847). Untreated typhoid results in maternal morbidity and mortality. Since typhoid outbreaks are common in Mombasa, women were aware of the symptoms. Samira, an informant who had been hospitalized for typhoid fever, explains:

> I started having headaches and diarrhea since the beginning of my fourth month of pregnancy. This continued on and off and I kept going to the hospital (CGH) for treatment. They took my blood and stool and tested them; the doctor said I had typhoid. At night I had fever and chills. Since the problem did not stop I kept going back to the hospital and they gave me antibiotics. I would stop having the problem and it would start again. When I was seven and half months I started leaking water

> that was around the baby(amniotic fluid) (*chupa ya maji kwenye uzao ilivunjika*). The doctor told me I should stay in the hospital otherwise I would loose the baby or the baby would come out early. I knew God knew best if this baby was going to survive or not (*najuwa Mwenyezi Mungu ndie mwenye kujua ikiwa huyu mtoto ataishi*) I was already tired of being in and out of the hospital, so I went home and waited for the baby to come. I had already finished the medicine that they wanted me to take; they said they wanted me to stay in the hospital to protect the baby. I had this baby three weeks early, and she is healthy. I still have problems with typhoid and I have to keep going back for testing and treatment (Informant 258).

This was Samira's fifth child; she had a history of one previous miscarriage at two months. Despite having typhoid, she refused to be admitted because of not having anyone to take of her other children. She risked losing this pregnancy or having a premature baby because of having to care for the others. This was a dilemma faced by many other women I interviewed who had either suffered from typhoid or malaria. Relapses occurred in many women, increasing their health deterioration and the cost of re-diagnosis and treatment. Women's poor health leads to a decreased immune system, thus increasing their susceptibility to other illnesses such as malaria (Brabin 1983) or anemia.

Malaria: Malaria is one of the most common infectious diseases in Mombasa. Malaria causes anemia in pregnancy and is the primary cause of maternal and infant morbidity and mortality in this area. Most Mombasans develop some immunity to the disease due to repeated infections. Many studies have assessed the effects of malaria in pregnancy (see Nyamongo 1998). Nosten et al. (2004) summarize the pathophysiology of malaria in sub-Saharan Africa. This study has concentrated on one of the main causative organisms of malaria, Plasmodium falciparum, the most common source of malaria in Mombasa. Pregnant women who suffer from malaria risk abortion, stillbirth, premature delivery and low-birth weight babies (Guyatt et al., 2004, Dicko et al. 2003). In addition, Van Geertruyden (2004) has reported on perinatal mortality caused by malaria in pregnancy. Prevention of malaria in pregnancy through the promotion and distribution of

insecticide treated bed nets for women attending prenatal care was started in Ker UNICEF (Guyatt et al. 2004). Pregnant women who attend prenatal care are give doses of oral suphadoxine-pyrimethamine once during the second and third trimesters to prevent malaria (Holtz et al. 2004).

Malaria in pregnancy increases the incidence of anemia (Matteeli et al. 1994), and possibly preeclampsia in first time pregnancies (Sartelet et al. 1996). Some women who had attended prenatal care received malaria prophylaxis, and had taken the medication. They were aware of the dangers of not taking the medication. Women and healers stated that Western treatment for malaria was preferable, especially since the herbal treatment could not be used in pregnancy. The herbal treatment used for treating malaria and other types of fever is the leaves and parts of the bark of a tree called *muarubaini*. Healers added that drinking the boiled leaves of the *muarubaini* could cause an abortion. Steaming and bathing with the water was recommended in pregnancy since it reduced fever. Women also buy over-the-counter anti-malaria drugs such as, Fansidar and chloroquin and self-treat when having fever or suspecting malaria.

Reproductive Tract Infection (*Shango*): Pregnancy predisposes women to increased vaginal discharge or leucorrhea. For some women this begins from the first month of the pregnancy. Leucorrhea does not require treatment; women are advised about good personal hygiene, and wearing cotton underwear. During the interviews, a lot of women brought up issues of vaginal discharge, so I probed for more about the problem. I knew that women ordinarily used water to cleanse after using the toilet; but did not use toilet paper. Some women were also aware of signs of vaginal infections, such as burning, itching, change of vaginal odor or fever. These symptoms were not

described by the majority of the respondents. I checked with midwives and physici who stated that they treated women with symptoms of fungal, bacterial vaginosis and sexually transmitted infections. The majority however went to traditional healers. Healers that I interviewed claimed that vaginal discharge in pregnancy is *shango* and its recurrence cannot be treated biomedically. They indicated that even after receiving biomedical treatment, to be healed women still needed *shango* treatment. *Shango* is a general term for all vaginal infections during pregnancy, however differential diagnosis and treatment changes depending on the symptoms. The healers explained the different types of symptoms related to sexual and non-sexual infections. For example, Mama Msena described the treatment for syphilis (*kisonono*) differently from the *shango* remedy. Women who had used *shango* treatment also related the problem with other pregnancy discomforts, as Mwanaisha explains:

> I was in my fifth month of pregnancy, I had gone for a doctor's hospital visit, because my baby was very low (*mtoto yuko chini*), and I was uncomfortable because of the discharge. The doctor gave me medicine to put down there (vaginal suppository). Since the baby was already low, I went to see Mama Mishi (a TBA and healer) who told me I should use the hospital medicine, that it will not hurt the baby. She showed me how to use the medicine. She said I had *mwamimba*, a condition that can make me loose the baby if not treated. She gave me *shango* treatment to help the hospital medicine and massaged me to lift the baby, since I could hardly walk (*hata kutembea nilikuwa siwezi*) (Informant 016).

Mwanaisha is a 20 year old, who had delivered her first baby. She was among many respondents who used both biomedical and herbal treatment for *shango*. However, some respondents who had experienced *shango* from previous pregnancies only went to traditional healers. Zubeda, a 26 year old mother of three stated:

> I have suffered from shango with every pregnancy, from the first month. I do not go to Western doctors (*Sendi kwa madaktari wa kizungu*). I either go myself or send for shango treatment, plus it is oral (*ni dawa ya kunywa*) instead of what the hospitals give you (meaning vaginal suppository).

Both Mwanaisha and Zubeda preferred the *shango* treatment and believed in its efficacy. On the other hand, the route of administration (oral or vaginal) was also a factor in women's choice of treatment. At times health professions did not take the time to explain the administration or listen to women's fears or concerns about non-oral medication. Traditional herbal treatments are at times given to be inserted vaginally, but TBA and traditional healers spent more time explaining to women how to use the herbs and where to store them. Lack of privacy, and modesty were issues in both the storage and administration of vaginal treatment.

Childbirth

My nurse/midwifery experience of 20 years provided a background to evaluate births while I was in the field. I had not attended home-births and with my clinical experiences, I was not sure how I would react to them. This stemmed from years of working in hospitals, plus my own reservations and knowledge that when emergencies happen during childbirths, they take place rapidly and have adverse effects on the mother or the baby or both. Bad outcomes happen even at the most advanced hospitals, but having the staff and equipment for appropriate and immediate care is reassuring. During my visits to birthing centers I was privileged to attend many births. On one of these visits, I arrived at the same time as Faiza, a patient whom I had met earlier when she came for prenatal care. Faiza was a 30 year old Arab woman who was having her second baby; she was escorted by her mother and husband who both sat in the living room to await the childbirth. The time was eleven in the morning, and she explained that her labor pains had started at six. Before coming to the birthing center, Faiza stated that she had been prayed for (*kuzunguliwa*) so that she would have a safe birth. She was in a lot of pain and had to be assisted on to the examination/delivering bed. The nurse, Samira, examined

Faiza while her assistant Zuena started to get the room ready for the birth. In between contractions when Faiza could communicate, she was questioned about her pains—the frequency and location—and was examine for evidence of bleeding or amniotic fluid leakage. Samira engaged Faiza in small talk about the family and community events. Faiza answered with difficulty due to her discomfort, but since this was not her first experience, she anticipated most of the questions and her answers were short but clear. From her explanation she was having regular, strong contractions, three minutes apart, was having normal bleeding, and was not leaking any amniotic fluid. On examination, Faiza was found to be halfway from delivering. That is, her cervix had opened five centimeters (a woman delivers when the cervix is at ten centimeters). At this moment the electricity in the center went off, but this did not deter anybody in the room. Everyone continued with the preparation for the birth as if nothing had changed. Kerosene lamps and flash lights were turned on. The equipment laid out was similar to what one expects to see for a normal childbirth in any hospital—that is, a tray, sterile scissors, cord clamps, gauze, cotton balls, and bowls. In addition, a supply of oxytocin (to prevent bleeding), intravenous fluids and a urinary catheter were kept handy for emergencies.

While the preparations were going on, Samira and Zuena encouraged Faiza to recite a special prayer called Suratyl Maryam from the Quran (Muslims believe this particular verse helps with labor pains, increases distraction and reduces anxiety). A tape recorder playing this verse was turned on and continued in the background since at times Samira and Zuena were in communication while they got busy preparing for the birth. As Faiza's discomfort increased, her moaning and groaning at times got louder. The care-givers took turns massaging her lower back, and gently reminded her to revert to the

recitation. She was also reminded to call to God for help through repeating "Ya Allah and Subhana-Allah". In the private and government hospitals in Mombasa where I had also attended childbirths, this type of personal attention was lacking.

By twelve-thirty in the afternoon, when Samira assessed her progress, Faiza was seven centimeters dilated. Her dress was pulled up to her chest. Two pieces of cloth (*khangas/leso)* were placed under her pelvic area on top of a plastic sheet, another covered her on top, and a fourth was put on the crib to wrap the baby once delivered. This was also very different from the government hospital, where women deliver on a plastic sheet, naked, with nothing covering them. Preparations for the birth were complete; hot water was boiling in the kitchen for later cleaning of the mother, baby, instruments and soiled linen. By one-thirty, Faiza was ready to deliver. Samira guided her patiently, and with her legs in the lithotomy position, Faiza delivered a healthy baby girl. Once the baby's head was out, the baby self rotated, and after the anterior came out, Faiza was given an injection of oxytocin on her right thigh to encourage uterine contraction and to prevent bleeding. The baby was given to Zuena and taken to the cot where she was wiped and wrapped with a *khanga.* The placenta was delivered two minutes after the baby and it was checked for completeness. Pieces of the placenta that might remain in the uterus can cause postpartum hemorrhage. The perineum was checked for cuts and tears th might need suturing and there were none. Faiza had not needed an episiotomy (a c increase the vaginal orifice). She was cleaned, two sanitary pads were placed on her perineum to catch the bleeding, and her legs were closed and straightened.

After being wiped dry, the baby was weighed. She was six pounds, eight ounces. Faiza's mother and husband were called in to see her and the baby. The father was asked

to perform the first call to prayer for the baby. This is called the *adhan* – whispered in the baby's right ear, and the *ikaba* into the left ear. This is an Islamic practice that is believed to prevent the baby from hearing the call or whisper of the devil, who misguides, and to hear instead the call of righteousness. After this ritual, the husband congratulated his wife and left the room. He asked Samira when he should come back to pick up his wife and baby and was informed that he should return four hours later. The baby was immediately bathed, given a teaspoon of honey and Zamzam water (this is holy water brought by people who have gone for pilgrimage to Mecca). The water is believed to have blessed and healing properties. After the bath the baby was massaged with Simsim oil, and *khol* (antimony) was applied to the baby's eyes and given to the mother for breastfeeding.

Preparation for the postpartum period (*arubaini*) began before Faiza left the center. An hour after the birth, Faiza was given porridge made of rice flour, milk, cinnamon, cilantro seeds, sugar and black pepper. The spices in the porridge are believed to increase the body heat that was removed by the physiological changes of childbirth. This practice, as explained by Manderson (1981:511), is found in most cultures that practice humoral medicine. She adds that "childbirth, then, depletes the mother of heat, blood and 'air' or vital breath, and renders her vulnerable to cold, wind, magic and disease". Faiza was covered with a blanket even though it was warm outside, so that she did not get cold. Two hours post delivery she was escorted to the bathroom, and the first ritual bath (*tohara*) was performed. Faiza was allowed to leave after she had urinated; this was to make sure that she did not have a full bladder, which can also cause postpartum hemorrhage.

This childbirth had a good outcome, and made clear to me why women would choose such an establishment as opposed to a hospital. I observed Samira in her practice as efficient. She took time in understanding her patients, screening them and transferring them to the hospital when conditions were out of her scope of practice. This did not occur in some of the other birthing centers I had observed. The patience, care and attentiveness given were different from how some women were cared for in government-run maternity hospitals. The choice of a birthing location has substantial consequences in the resources available and in the kind of social interactions obtained (Jordan 1978). Obermeyer (2000: 184) observed that women in Morocco who could afford to deliver in a hospital chose to deliver at home-based birthing centers. She contends that Moroccan women see the hospital as an "unfamiliar place where they are under the supervision of strangers and where decisions about their care are made according to criteria that are often incomprehensible". This home-birthing center had minimal biomedical specialization. Faiza was in a familial surrounding, attended by people she knew, and not leaving the environment/neighborhood she was intimately familiar with. Childbirth in such surroundings provided security that marked the event as a normal part of everyday life. Faiza's husband returned and picked her up with the baby, and her mother. Faiza w leaving to stay with her mother for the beginning of *arubaini*.

Postpartum period (*Arubaini*)

The period of 40 days after childbirth is termed *arubaini*, which means forty in Arabic. It is a time for complete recuperation. The concept of six weeks as the postpartum period is observed in biomedicine as well, a time where there is reversal of the physiological changes that occurred in pregnancy. In Mombasa, *Arubaini* is practiced by all ethnicities, though more rigidly by the Waswahili. It is practiced in most countries

that practice humoral medicine (Manderson 1981), including the Middle East, India (Goodburn et al. 1995), West Africa (Wall 1998) and North Africa (Obermeyer 2000). During *arubaini* women are considered weak due to blood loss and the rigors of childbirth. The woman is not allowed to cook, clean or do normal household chores. She remains in bed, and is served hot soups (made of chicken, beef oxtail with lots of spices) so that she can sweat and get rid of body impurities. Porridge or gruels rich in milk and honey, again with more spices, are offered in between main meals to provide strength and increase breast milk for lactation. The confinement and enclosure from the cold is to prevent loss of body heat. The removal of body impurities through sweating is emphasized. The woman is not allowed to drink or touch cold fluids, including beverages. Bathing is with very hot water. The hair is not washed at least for a weak or until the initial bleeding stops. The head is considered the part of the body that looses a large portion of body heat. Heavy clothes are worn to prevent heat loss. It is believed that exposure to cold air could result in deterioration of one's body, particularly in old age. Degenerative diseases, such as rheumatoid arthritis or weakness of any limbs are associated with exposure to cold air (*baridi*). The room in which women spend the *arubaini* is kept closed to prevent cold air drafts, and a space heater or heated coals (*jiko*) may be kept in the room to provide heat. After a bath the woman stands over the fire. This "mother roasting" is done to close open skin pores and hasten closure of the open womb (Manderson 1981: 512). A masseuse comes in daily to massage the woman with warm oil to get her joints and uterus back in shape. A *khanga* or bed sheet is tightened around the abdomen as a girdle to provide back and uterine support.

On the seventh day, the woman is allowed out of bed to bathe and perform *tohara.* She can now move around the house, but not outdoors. Prohibitions of activities restrict her leaving the home except in an emergency. If a son is born, the baby will be taken for circumcision by a relative and two unblemished goats are slaughtered. For a daughter, one goat is slaughtered and a small feast is prepared for thanksgiving. Babies born at home are taken by a relative to the health department for registration and weighing and first tuberculosis prophylaxis. During these forty days, the baby is given a half a teaspoon of honey mixed with pure ghee daily for strength. To remove *hasad*, a black amulet is tied on the baby's arm or around the neck. Inside a piece of a Quranic verse or a small piece of a special bark (*mvuje*) (which has a pungent smell) with cardamom seeds (which have a sweet smell) and black pepper is used for the same purpose. All these rituals are aimed at soliciting divine assistance and warding off misfortune (Sered 1994).

During this period, the woman spends time at her parent's or in-laws if the parents do not live close. Women at times travel during the last trimester to the home where they will be in *arubaini*. Financial or other logistic arrangements of travel are done early in the pregnancy to facilitate the travel of the woman to where she will be in *arubaini*. The husband visits and provides for the wife and her family during the duration of her stay away from home. The movement of the woman away from her residence to her parent's home interferes with prenatal care or medical follow-up unless previously arranged. Odile (1983:140) cautions that a long period of postpartum abstinence encourages the sexual mobility of men (including extramarital sex, divorce, polygamy and visiting of prostitutes) and is associated with an increased incidence of sexually transmitted infections that can lead to infertility.

Some women will attend prenatal care services close to where they will be in *arubaini*. This provides continuity of medical and obstetrical care, particularly if there had been any previous problems. I interviewed women who worked outside the home who did not leave their homes for *arubaini.* However, some women left from the seventh month of their pregnancies and six weeks after delivery and they had not returned to their marital homes. For some women, prenatal care is not continued when they leave for *arubaini*. Other women, on the other hand might restart with a private physician or go to the nearest health department. Since records are not usually taken, the new clinician might not be aware of the woman's obstetrical problems. Some husbands complained of this cultural separation, especially due to the expense of taking care of two homes, plus disruption of their marital relationship. *Arubaini* was a time of rest and a break from daily hard work and routines, especially for those who complain of in-laws who overwork them.

Return to routine chores is slowly resumed after three to four weeks or for some women the whole forty days. On the fortieth day, if the woman left her marital home, she performs *tohara* again. She is also decorated with henna tattooing on her hands and feet. She and the baby are dressed in new clothes and are escorted to her marital home.

Arubaini is not practiced by all Mijikenda groups; different rituals take place after the third day. On the third day, the baby's grandmother throws water on the roof of the house and the baby is kept in an open basket (*uteo*) below the roof where the water will drip. This exposure I was informed was to make sure that the baby does not fear rain drops. After this experience, the baby is placed on the mother's back. The woman is given an axe and has to chop a small piece of firewood; this is to teach her how to chop

firewood with a baby on her back. For the rest of the month small chores are re-introduced daily, all done while she is either breastfeeding or carrying the baby. This process continues until she is strong enough to return to full work in the fields. Simultaneously, some of the other rituals, such as hot foods, hot baths and body massage are performed.

CHAPTER 7
SUMMARY AND CONCLUSION

Introduction

Across the world, public health indices reflect social and economic indicators (Gupta et al. 2003). The impact of poverty is particularly strong on women's health (see for example, Glanz et al. 2003) and on the health of the children they bear (see for example, Garcia-Gil 2004, Grjibovski et al. 2002, Kaplan et al. 1996). Efforts to improve the health of women and infants must address the causes of poor health. In this chapter, I apply a cultural materialist framework to analyze the findings of this research. "Cultural materialist theoretical principals are concerned with the problem of understanding the relationship among the parts of socio-cultural systems and with the evolution of such relationships, parts and systems" (Harris 2001: 71). The organization of this chapter follows the infrastructural, structural and ideological factors on which women's health appears to depend. The specific infrastructural factors include demography, transportation, and reproductive technology. According to Harris, the infrastructure shapes the structure (class, ethnic, family structure, domestic and political economy) which in turn influences people's ideology.

A materialist framework includes culture as an important determinant of health-seeking behavior in any society since the assumptions (based on different kinds of knowledge) about the causes and treatment of illness differ between lay people and health care professionals. These assumptions change over time as culture responds to changes in the other components of society. Chavez et al. (1995), for example, found that Latinas'

understanding of the causes of breast cancer were increasingly similar to those of physicians in the United States the closer the women were to U.S. culture. The folk models of Salvadoran and Mexican women were furthest from that of physicians; those of U.S. born Chicanas overlapped with those of Mexican women and Anglo women; and those of Anglo women resembled most those models of physicians.

Demographic and Obstetrical Determinants of Health Care

Age is an important factor in reproductive health. Lack of education and early marriages means early pregnancy with its many probable hazards. Girls under fifteen may face five times the risk of death in pregnancy and childbirth which women aged 20-24 years face, and the risk remains twice as high for girls between fifteen and nineteen (UNICEF 1991: 30). Girls who are not HIV infected or sexually active are particularly prized as wives and mothers at their very young age. For these young mothers and their children, expanded health education is critical, with emphasis on health education, knowledge about contraceptives, birth spacing and other safe motherhood practices.

Unlike many parts of Kenya, people in Mombasa are extremely heterogeneous, (Chapter 2) making ethnicity an important component to consider when assessing health care. Given this heterogeneity, provision of health care has to take into account how risk is defined by particular groups, and the strategies that women, men, healers and healthcare providers use to address or counteract risk (Allen 2002). For example, beliefs held by the Mijikenda about the preventative care that a pregnant woman needs are not shared by other Waswahili. As well, ethnic groups are not bounded entities—both patients and healers frequently cross lines in how they receive or provide health care (Good 1986). Educating a particular group about health care requires understanding the knowledge and beliefs of that group.

Women in Mombasa share with women everywhere the responsibility of looking after their family, including, at times, a very extended family. Women's chores are burdensome and may include work in both the formal and informal sector. Most women do not have help or labor saving devices, which makes daily chores both time-consuming and exhausting. Women are pulled in many directions leaving them exhausted and not having enough time to take care of their health. The women in Mombassa whom I studied, like women across the developing world, worried about the availability of basic necessities, like electricity and water that are taken for granted in the industrialized world. The effort and time spent on getting and maintaining these basics prevent women from spending needed time on preventative health care practices.

The majority of women who work outside the home are employed as secretaries, teachers, nurses and clerks—occupations at the lower rungs of the occupational ladder. An increasing number of women are involved in the informal sector in a wide range of micro-enterprises to supplement their incomes. I observed women traveling as far as the Middle East to buy goods such as, gold and perfumes to sell to other women in homes. Women who have sufficient economic independence and social status also have control over their sexual and reproductive lives and do not allow mere fate to dictate their health. Women's increased income makes accessibility to resources such as health care and education possible. As stated by Handwerker (1989: 15) "Changes in women's power relationships are predicated on fundamental changes in women's ability to gain access to resources". Women use financial independence to educate their children and to provide health care for themselves and for their families. The competition into the world economic system has developed "social conflict and depersonalization of social relations"

(Bernard In Handwerker (1989: 9) such as increased divorces and more female headed households.

Women's duties, of course, include childbearing and mothering. Pregnancy and childbirth is supposed to be a family's happiest moment, but for some women, it is obviously not. Good health prior to and during pregnancy increases a woman's chances of surviving a pregnancy-related complication, while conditions such as anemia create and exacerbate complications of pregnancy. Anemia is the consequence of poor intake of foods rich in iron and protein. Women in most developing countries where food is scarce eat after the rest of the family has eaten.

Another problem that affects almost all women in Mombasa is malaria. Malaria in pregnant women can be a major cause of anemia, resulting in death in utero or in low birth weight babies. The use of mosquito nets and prophylactics works to prevent malaria but resources for programs that provide these are scarce nationally and are beyond the means of many poor women locally. Even women who attend prenatal care services may not be given iron and/or malaria prophylactics because these items are not available. Another problem is lack of regimen compliance, so that iron supplements and anti-malarial medications are not taken properly (see Chapter 6). Recommendations to improve women's nutritional status and their resistance to diseases have to be developed through counseling during prenatal care and postpartum visits, and delivered nationally through media campaigns. Kenya has come a long way in anti-malaria campaigns; however more education is now needed in the use of over-the-counter anti-malarial medications like chloroquin and chamoquin. I observed pregnant women who thought they might have a fever (homa) buying and taking a course of the above pills without

diagnosis or testing for malaria. Secondary infertility was cited as a problem by almost one in four women. Family planning efforts have concentrated on reducing the number of children, not on assisting those who have infertility problems. Women who considered infertility to be an issue, shopped for healers who would listen to their problem and provide care. They found traditional healers more receptive to their problem than biomedical clinicians. Women need to feel secure and confident when seeking biomedical care for infertility.

The majority of women do not receive postpartum care if the delivery is uncomplicated. Babies are taken for a well-baby check-up (for weighing and immunization) by other family members. Women need postpartum checks to make sure they are healing after delivery, and they need counseling on breastfeeding, weaning, nutrition, contraceptives, perineal exercises, baby care, cancer screening and STI/HIV prevention.

HIV infected women are often first identified in reproductive health settings mostly related to other STIs. These women need counseling about HIV-related issues in pregnancy. Information should be consistent and repeated with patience and confidentiality. These women may have other problems that need to be addressed, since they are prone to domestic violence or divorce (Chapter 3). In Mombasa, the majority of women tested for HIV do not go back for results for fear of finding out that they are positive, knowing that counseling and treatment may not be available. Health care providers as well withhold information when they know that there are no antiretrovirals that the patient can afford. The general messages of HIV prevention and transmission have been successful in the community. However, emphasis on the importance of

choosing a birthing facility that can reduce MTCT has not been emphasized. The results from this study will be shared with clinicians and HIV/AIDS prevention advocates in Mombasa.

Household Characteristics and the Domestic Economy

"Family and household characteristics, such as co-residence with in-laws and the nature of the household economy, affect the balance of power and use of [health] services" (Blanc 2001: 192). In such families (Chapter 5) a young woman's labor and mobility is managed or controlled by the senior women and men in the household (Morsy 1993). Since attending prenatal care is a preventative measure, women who attend most of the assigned visits may be criticized or accused of laziness and using services as an excuse to slack off from their home duties. Most of the women I interviewed in these families said that they had to finish their designated chores and then ask for permission before going to the health department. Sometimes there was simply not enough time to finish the house work and attend prenatal care services. The services are offered at most health departments only three mornings a week. At times the husband is not the person in authority. He may also be subordinate to his older brothers, mother or father, whom he tries not to displease so as to avoid family dissension. A woman who has the backing of her kin or has an education and/or income can be more vocal in decisions either directly or through her relatives. However, most of the time, relatives are the therapy managers and decide where and when a woman can seek health care.

Within households, women were concerned about the accepted practice of polygyny. In polygynous homes women and children are often economically and emotionally disadvantaged. Women are left to fend for themselves and their children, depending on the husband's time arranged between co-wives or households. The sharing

of limited resources, love and attention creates an unhealthy competition between the women which causes stress and anxiety. Some women accepted their husbands taking a second wife, particularly in instances of infertility (Chapter 6). Polygyny impedes further the effort to decrease STIs and HIV. Men's sexual mobility (Chapter 6) means that multiple wives are at risk of infection.

Local and State Political Economy and Health Care

More recently, programs in Mombasa to better women's health and to reduce STIs and HIV/AIDS have also targeted men. Community based seminars in the Muslim community are encouraged with assistance from international NGOs, such as Pathfinder International and UNAIDS. These groups have targeted the Supreme Council of Kenyan Muslims (SUPKEM) at the Council's headquarters in Nairobi and Mombasa and elsewhere across the country, and have included all imams and preachers in the prevention programs. The imams and preachers in Mombasa have become the proponents who assist in disseminating information on religious and socio-cultural practices that affect societal health. Issues such as early marriages, the secular and religious illiteracy of women, divorce, polygyny, HIV/AIDS, and female genital surgeries are now openly discussed, particularly with regard to their effects on women and methods to decrease their prevalence. These same NGOs have added obstetrical health issues as a community concern. One of the agendas is to identify and acknowledge non-biomedical health care givers, like traditional birth attendants.

Traditional birth attendants in Kenya are not recognized as part of the formal health care sector, although in most parts of the country they provide more services than do the biomedical professionals. In addition, the government has not taken a strong lead in incorporating TBAs into the formal health care sector. Their incorporation into the

health sector would be beneficial since they can then be supervised and better trained. TBAs can be encouraged to keep a simple diary to record the number of pregnant women seen, referred and delivered. This diary can be presented to the chief with notes about the outcome of deliveries: date of birth, sex of the baby, birth injuries, and condition of the mother after delivery. TBAs whom I interviewed said that they were receptive to the idea of advice and assistance from the official health sector. Presently, almost half of the births in Mombasa are unrecorded. The collection of women's health statistics will not be complete without the inclusion and training of TBAs (Ayiemba and Mogere 1999: 23). Even with incorporation of TBAs, however, the critical factor in averting morbidity and mortality in pregnant women is the availability of advanced health services to care for women with complications.

Unfortunately, the health care facilities in Mombasa often lack essential drugs, supplies and equipment. They may lack competent staff, and there is often delay of services and errors in diagnosis and treatment. Just 30% of Kenya's health care budget is allocated to prevention and 70% is allocated curative care (Owino 1997: 11). In addition to financial problems, Kenya's health care services suffer from managerial and organizational problems which have adversely affected the availability of quality public health services. It is generally accepted that the essence of progress in a country is improving the quality of life, including extending longevity and reducing infant mortality. For this to happen in Kenya, more public resources (through donor support) need to be directed to preventative health care services (ibid). Over-concentration of facilities, both private and public, results in competition and inefficiencies in the delivery of health services. The government and professional body that should enforce minimum

standards of care, particularly in the urban areas, barely exist. Moreover, even the poor service available is out of reach for many women because of cost (Chapter 5). In their study of health care cost, Owino and Were (1998) examined waivers and exemptions for vulnerable individuals who cannot afford health facility costs, and suggested the pooling of revenues to subsidize those least able to pay. In Kiswahili there is a saying, *cha bure chaumiza* (what is free hurts). Women invoke this saying when free health care services are offered. The saying also implies that women do not want or expect free services but do want to pay for worthwhile services. Another saying is *vipi unisumbue na pesa yangu?* (how can you frustrate me with my own money?) This question emphasizes that women will demand better services or shop elsewhere when not satisfied.

Culture and Women's Health Beliefs

Cultural beliefs are not static. Attitudes and practices that disadvantage women's health can and do change in favor of those which "accept and promote the universality of human dignity and rights, regardless of gender" Odaga (1994: 27). In this study I portray culture as an important component for understanding women's health problems. Initiation to womanhood with female genital mutilations (FGM) creates immediate health risks and trauma that are harmful during pregnancy and parturition. Some form of FGM is still practiced widely among Muslims in Africa (Toubia and Sharief 2003).

There is some evidence that public opinion is turning against the practice, but the shift is slow and depends on women having the power to reject it. This, in turn, depends on larger, macro social changes. However, other practices such as those of the *somo/mwari* (see Chapter 6), where an older woman teaches an initiate (without surgery), can be adapted to ensure better health practices. If the *somo* has knowledge about good health practices, she can pass the information to her *mwari*, beginning a generation of

knowledgeable women. Knowledge, however, does not produce behavioral change without the power to do so and the power in this case is financial independence for women, just as it has been the engine of the second demographic transition.

In Mombasa, I observed an increased sharing of cultural practices, for example Somali women have learnt and adopted from Arab women a different way of practicing female circumcision. Somali women who practice infibulation (which is the extensive removal of a girl's clitoris, labia minora and part of the labia majora or type 3) as *sunna* or Muslim religious directive learn from other Arab Muslim women who practice partial clitoroidectomy (type 1) (Chapter 6) . Although both practices produce physical and psychological trauma, there is less physiological damage with type 1 than with type 3. This decreased injury prevents further trauma during childbirth. Moreover, the non-Muslim communities do better in terms of preventative maternal/child health care, which the Muslim community is now emulating. This relevant behavior which is contributing to better health is shaped by norms and routine activities, which are even more adopted with women with secular education. It is a known fact that schooling is an influential component of health worldwide. The education of girls in Mombasa, like most other parts of Kenya has not been a priority (Chapter 5). As of this year 2005, primary or elementary education has just been made free to encourage school attendance in Kenya. The presence of Muslim girls in secondary and the university is gradually increasing due to community and varied motivators. Education is not the only factor that creates social change. Social change is a long-term process that involves a few generations and begins when women autonomously have and control their own income. Bernard (In Handwerker 1989: 8) states that, "women's status is low when they optimize their access to resources by

relying on their husbands, parents, and children; women equalize their power, relative to their parents, their husbands and their children to the extent that they are free to gain access to resources independently".

I left Mombasa twenty years ago when I was part of the health care system. During this revisit I saw a major deterioration of health care facilities and poor care particularly in the government/municipal health departments, which most women depend on. On the other hand, health care facilities have mushroomed all over the island. Some provide decent care while others offer mediocre care for profit. I was pleased to observe the involvement of women who are more proactive in questioning substandard services and at times not accepting what is offered. Despite the various challenges faced by women, there are dramatic positive changes as a result of new opportunities in education, labor force participation, women's group activities, legal reforms and a variety of other initiatives both in Mombasa and at the national level (Suda 1999: 6). Handwerker (1989: 31) argues that health care providers and organizations are the "gatekeepers" and have power and therefore access to health care. In the same vein, he asserts that "virtually no one is without power". Women with resources are using their power to improve health care access and consequently their lives. Swahili culture also accepts the idiom "prevention is better than cure" (*kheri nusu shari kushinda shari kamili*). In addition, as a result of advances in information technology, women in Mombasa, like those all over the world are in the process of changing in different ways and in their behaviors accordingly to improve their lives.

APPENDIX A
DEMOGRAPHIC CHARACTERISTICS

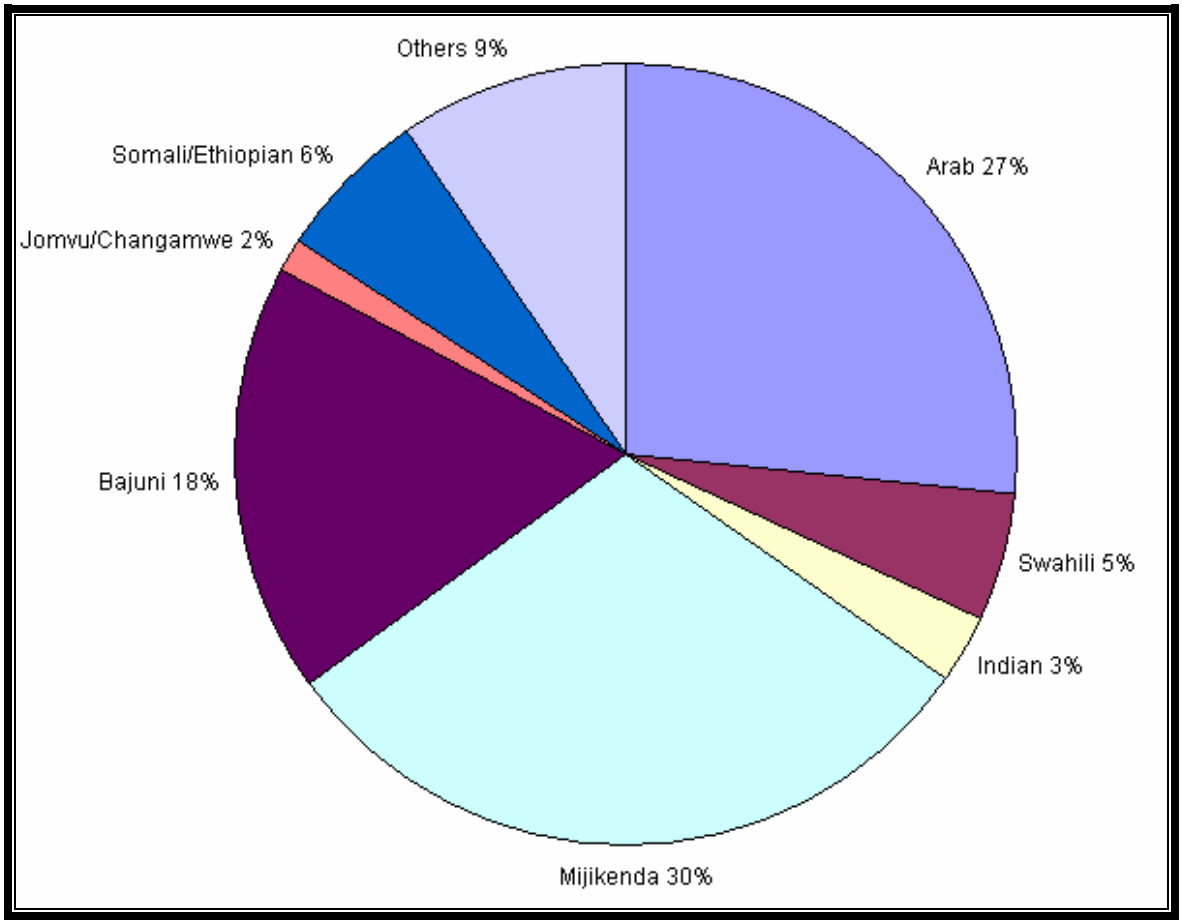

Figure A-1. Percentage of respondents by ethnicity

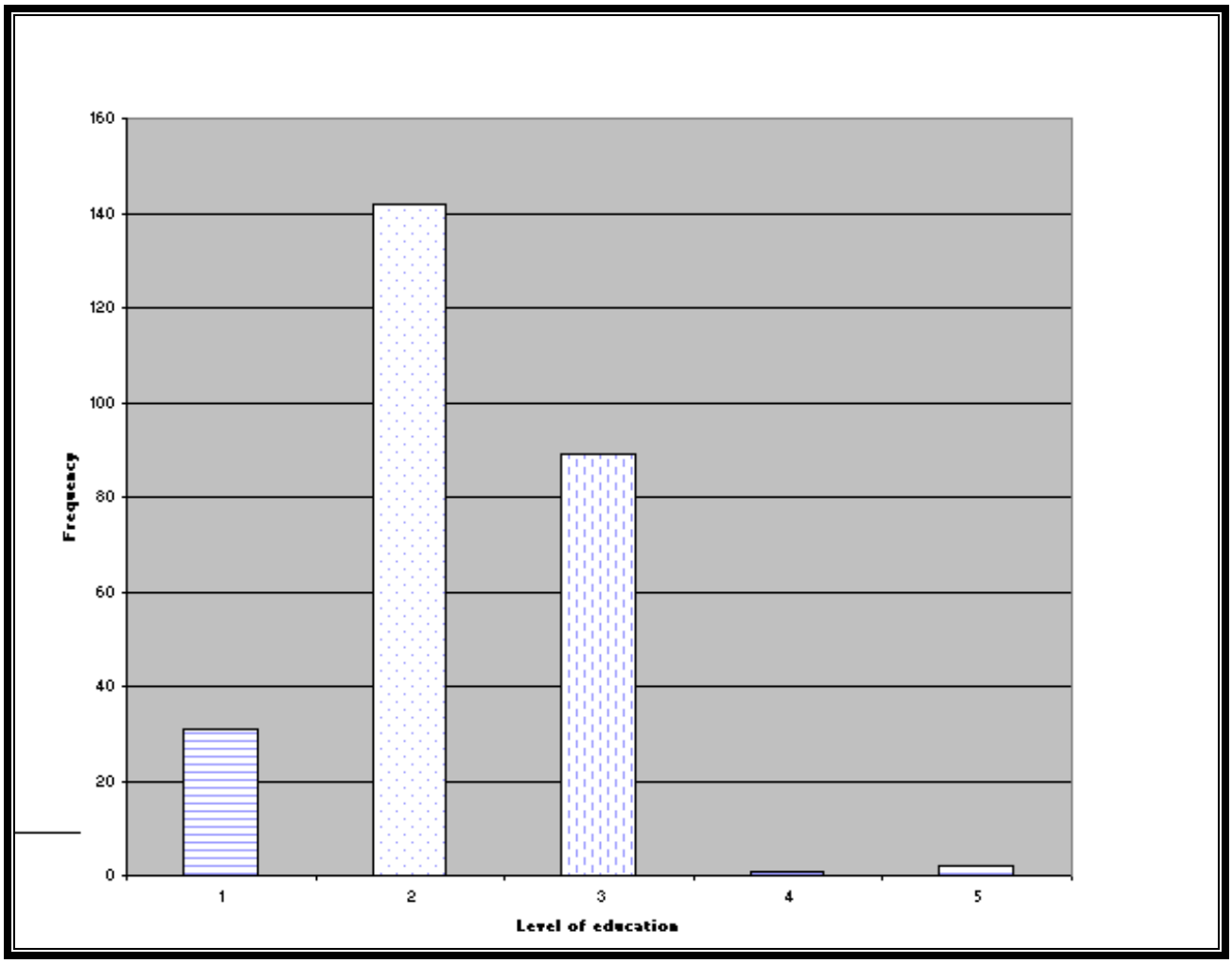

Figure A-2. Respondents' level of secular education

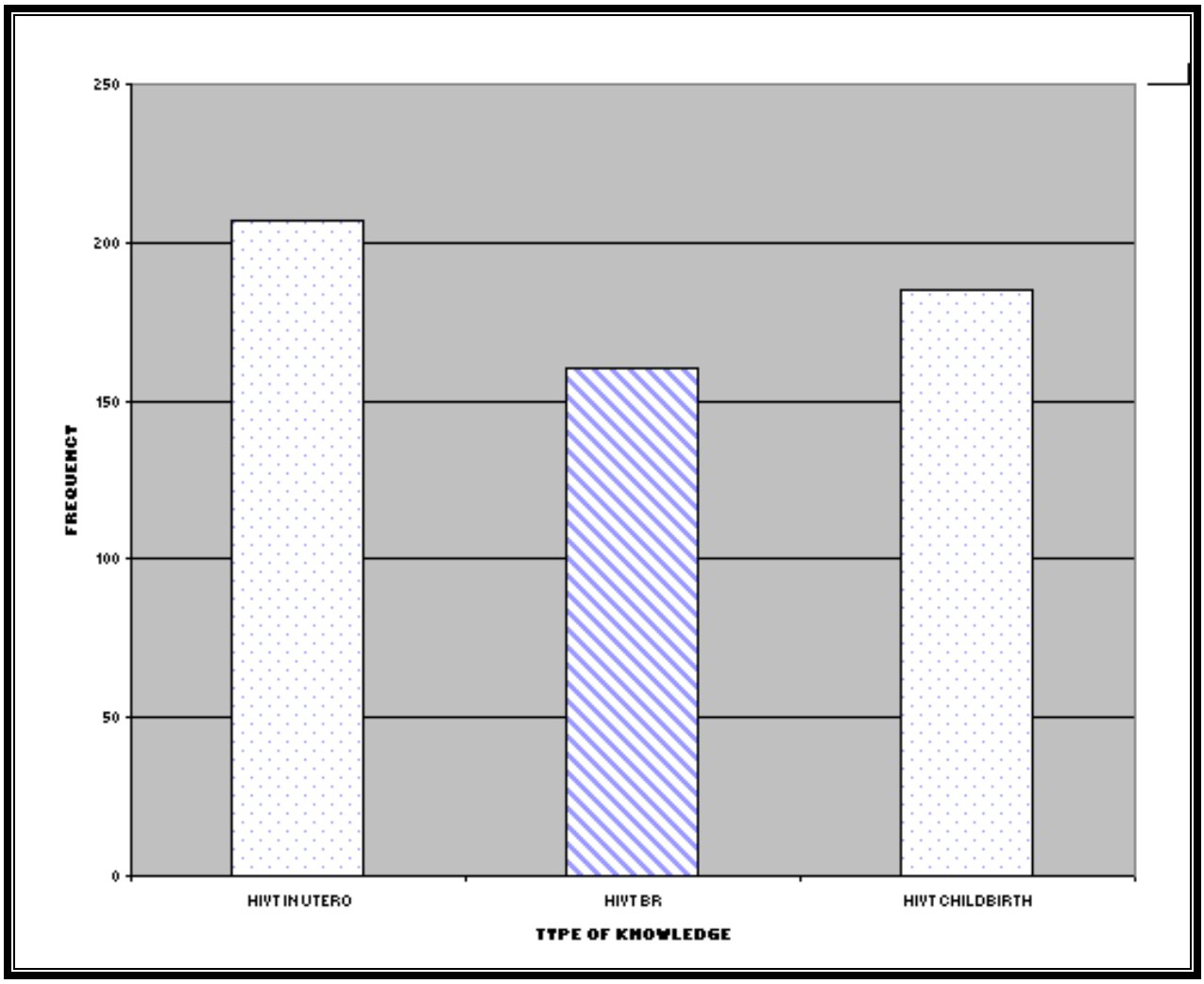

Figure A-3. Respondents' knowledge about mother-to-child HIV transmission

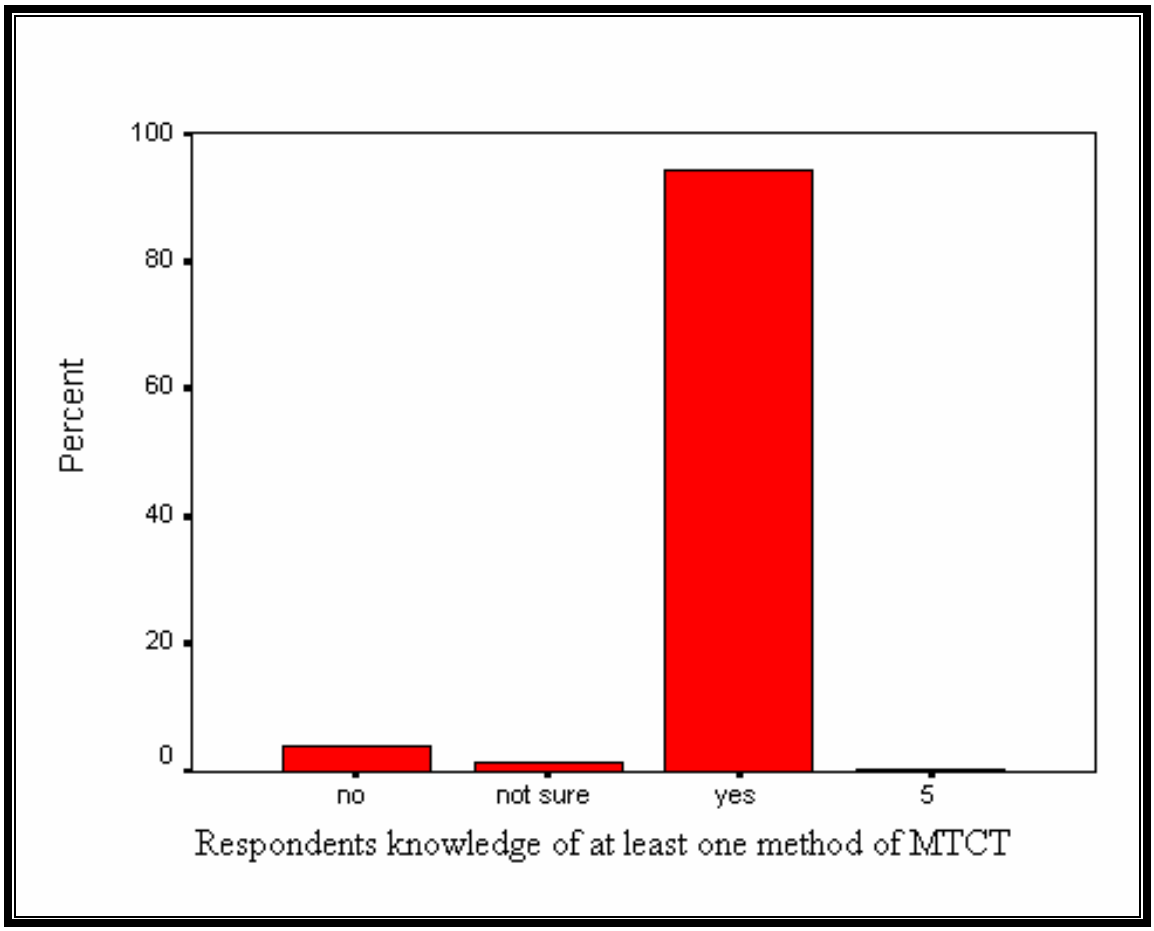

Figure A-4 Respondent's knowledge of at least one possible method of mother-to-child transmission.

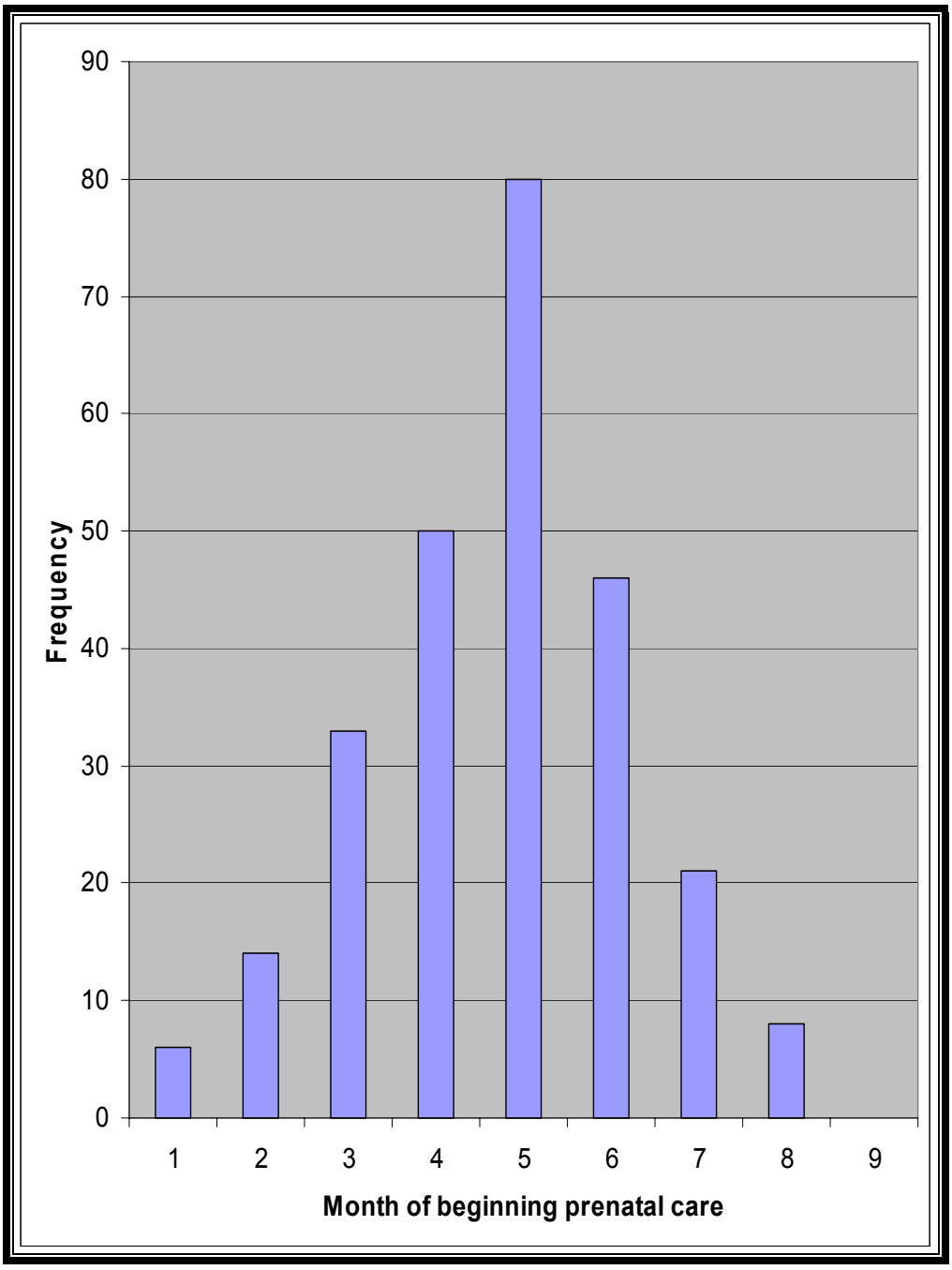

Figure A–5. Month biomedical prenatal care started

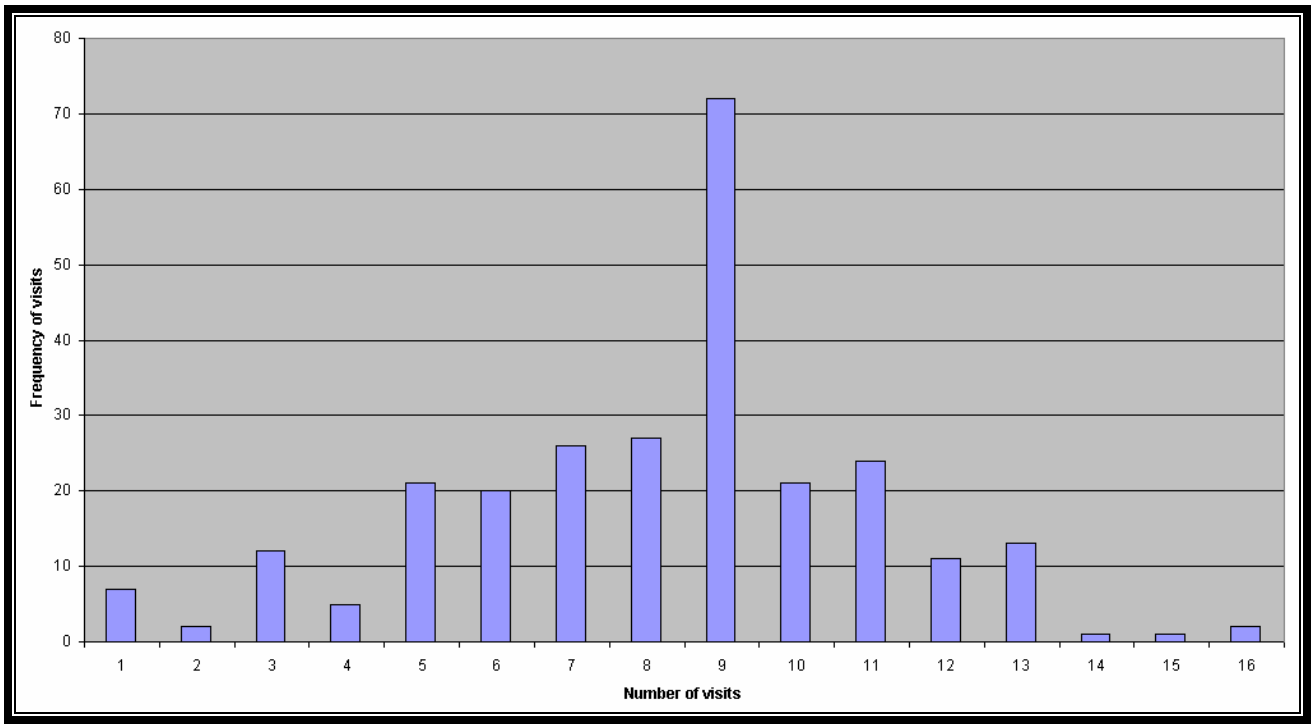

Figure A–6. Respondents' number and frequency of prenatal care visits

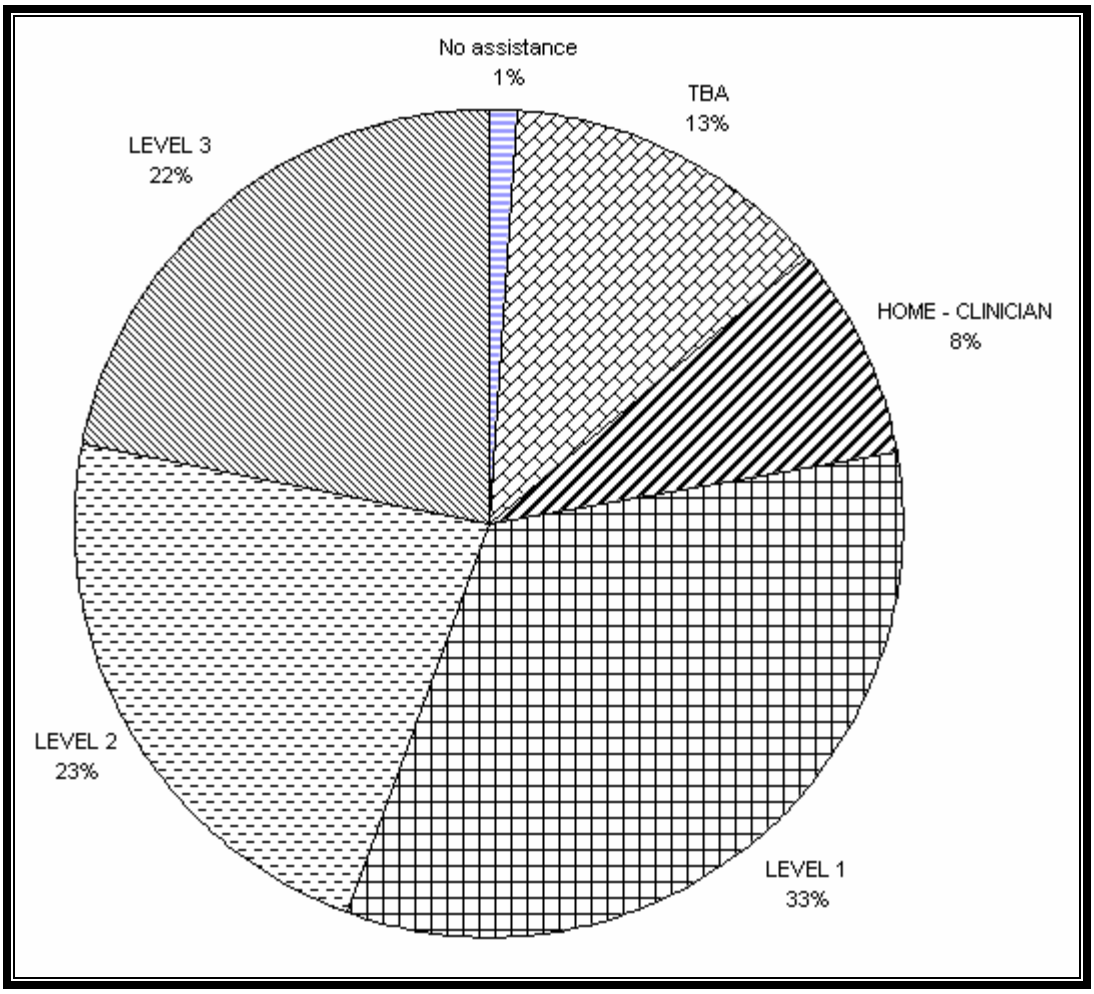

Figure A–7. Percentage of respondents choice of birthing facilities

Descriptive statistics for independent variables

Table A-1. Section A - Demographic characteristics

Variable	N	%
Number of respondents	265	
Mean age of respondents	26	Range 16-47
16-20	44	16.6
21-34	204	76.98
35-47	17	6.4
Ethnic affiliation		
Arab	71	26.8
Swahili	14	5.3
Indian	7	2.6
Mijikenda	80	30.2
Bajuni	47	17.7
Jomvu/ Changamwe	4	1.5
Somali/ Ethiopian	17	6.4
Others	25	9.4
Education		
None	31	11.7
Elementary	142	53.6
Secondary	89	33.6
Trade	1	0.4
College	2	0.8
Islamic education		
None	17	6.4
Basic	39	14.7
Elementary	146	55.1
Advanced	63	23.8
Occupation		
Housewife	139	52.5
Teacher	11	4.2
Accountant	7	2.6
Secretary	15	5.7
Sales	56	21.1
Seamstress	15	5.7
Hairdresser	8	3.0
Other	14	5.3

Table A-1. Continued

Variable	N	%
Marital Status		
Single	1	0.4
Married	257	96.9
Divorced/ Separated	5	1.9
Widow	2	0.8
Marital Union		
Monogamy	228	87.2
Polygamy	29	10.9
Missing data	8	3.0
Obstetric characteristics		
Number of children		
One	44	16.6
Two	66	24.9
Three	25	9.4
Four	12	4.5
Five or more	19	7.2
Number of miscarriages		
One	23	8.7
Two	6	2.3
Three	5	1.9
Four	1	0.4
Number of stillborns		
One	11	4.2
Two	2	0.8
Three	1	0.4

Table A-2. Section B - Household characteristics

Variable	N	%
Spouse/Partner's education		
None	4	1.5
Elementary	85	32.1
Secondary	153	57.7
Trade	4	1.5
College	11	4.2
Not sure	3	1.1
Partner's Islamic education		
None	12	4.5
Basic	17	6.4
Elementary	103	38.9
Advanced	122	46.0
Not sure	6	
Partner's Occupation		
Driver	66	24.9
Shopkeeper	18	6.8
Clerical work	46	17.4
Carpenter	3	1.1
Businessman	42	15.8
Salesman	24	9.1
Builder	13	4.9
Other	39	14.7
Unemployed	6	2.3
Not sure	8	
Medical Insurance		
Yes	60	22.6
No	197	74.3
Not sure	2	
Insurance type		
National hospital insurance fund (NHIF)	57	21.5
Other	4	1.5
Not sure	3	
Home ownership		
Yes	117	44.2
No	148	55.8

Table A-2. Continued

Variable	N	%
Rent homes		
Yes	136	51.3
No	129	48.0
Given/ company homes	12	4.5
Available tap water		
Yes	226	85.3
No	39	14.7
Buy water		
Yes	76	28.7
No	189	71.3
Electricity in home		
Yes	244	92.1
No	21	7.9
Car ownership		
Yes	33	12.5
No	232	87.5
Telephone ownership		
Yes	175	66.0
No	90	34.0

Table A-3. Section C – Knowledge of mother-to-child- HIV transmission

Variables	N	%
Aware of transmission		
Yes	249	94.0
No	4	1.5
Not sure	12	4.5
Source of information		
Word of mouth	41	15.5
School/ college	25	9.4
Health care provider	113	42.6
Media (radio, TV, newspapers, magazines)	245	92.5
Respondents tested for HIV		
Yes	189	71.3
No	76	28.7
Knowledge of transmission		
In utero	207	78.1
Childbirth	185	69.8
Breastfeeding	160	60.4

Table A-4. Use of maternity health care

Variable	N	%
Prenatal care initiation at biomedical facility		
None	7	3.0
First month	6	2.3
Second	14	5.3
Third	33	12.5
Fourth	50	18.9
Fifth	80	30.2
Sixth	46	17.4
Seventh	21	7.9
Eighth	8	3.0
Number of visits		
None	7	2.6
Less than six	57	21.5
Six	20	7.5
More than six	181	68.3
Advisors to initiate biomedical prenatal care		
Self	39	14.7
Husband	136	51.3
Mother	41	15.5
In-laws	33	12.5
Friend	11	4.2
Other	5	1.9

Table A-4. Continued

Variable	N	%
Transportation		
Walk	60	22.6
Drive	6	0.6
Public transportation	186	70.2
Taxi	2	0.8
Reasons for using a biomedical facility		
Islamic institution	31	11.7
Distance	83	31.3
Health care provider/s	115	43.4
Cost	101	38.1
Services	186	70.2
Health problems	18	6.8
Reasons for not using a biomedical facility		
Long waiting period	43	16.2
Health care provider/s	45	17.0
Distance	22	8.3
Services	28	10.6
Cost	27	10.2
No response	7	
Choice of childbirth facility		
Home- no assistance	3	1.1
Home with a traditional birth attendant (TBA)	34	12.8
Home with clinician	22	8.3
Level – 1 hospital	88	33.2
Level – 2 hospital	60	22.6
Level - 3 hospital	58	21.9

Table A-5. Logistic regression model - results of the determinants of using prenatal care

Odds of using prenatal care by women who reported using biomedical facilities

Variables	df	OR	p-values
Respondent's education	2	0.112	0.0011***
Partner's Islamic education	3	0.227	0.0654*
Telephone ownership	1	0.162	0.0114**
Knowledge of HIV transmission (in utero)	1	0.188	0.0313**
Number of miscarriages	1	0.575	0.0344**
Islamic institution		1.072	0.8828 ns
Distance		1.742	0.0836*
Health care provider/s		1.151	0.6536 ns
Cost		1.619	0.1751 ns
Services		2.326	0.0211**
Health problems		-	-

***p < 0.01, **p < 0.05, *p < 0.10 ns=not significant

Table A-6. Logistic regression model - odds of choosing of a birthing facility as reported by respondents

Variables	df	OR	p-values
Ethnicity	6	12.173	<0.0001 ***
Insurance	1	0.282	0.0008 ***
Education	2	0.013	0.0194 **
Tested for HIV	1	0.033	0.0119 ***
Knowledge of MTCT (in utero)	1	0.218	0.0001 ***
Previous childbirth	1	0.286	<0.0001 ***
Education and HIV test	2	1.112	0.0329 **
Previous childbirth and HIV test	1	2.977	0.0009 ***
Islamic institution		1.500	0.3447 ns
Distance		1.776	0.0657*
Health care provider/s		1.822	0.0336 **
Cost		3.642	< 0.0001 ***
Services		0.587	0.1252 ns
Health problems		0.479	0.2165 ns

***p < 0.01, **p < 0.05, *p < 0.10 ns=not significant

APPENDIX B
QUESTIONNAIRE

1. Interview code (ID): _____ Date _____
2. Interviewer _____

Section A Demographic Questions

3. Age _____ 4. Ethnicity _____

5. Marital Status
_____ Single (1)
_____ Married (2)
_____ Common law (3)
_____ Divorced/ Separated (4)
_____ Widow (5)

6. Marital Union Monogamy (1) _____ Polygamy (2) _____

7. Husband's residence? _____

8. Do you work? Yes (1) _____ No (0) _____
8a. What is your profession? _____
8b. Do you have medical insurance? Yes (1) _____ No (0)

9. What is the highest grade you have completed? ___Grade ___class ___none

10. Did you attend Islamic schooling? ____ Yes (1) _____ No (0) ____
10a. How many years? _____

11. Are there any children in your household who are in school? ___Yes__No(0)
11a. Which school do they attend? _____
11b. Do the child/ children attend madrasa? _____ Yes ____ No
11c. How frequently? _____

Section B Household Characteristics

1. Does your husband work? Yes (1) ____ No (0) _____
1a. What is his profession? _____

2. Does he have any type of medical insurance? Yes (1) ____ No (0) ___
2a. What type? _____

3. What is your husband/partner's highest grade completed in school?
_____ grade _____ class _____ none
3a. Did your husband/partner attend Islamic schooling? Yes (1) ___ No (0) ____
3b. How many years? _____

4. How many adults live in your home? _____
4a. How many work? _____

5. Your house is ____ rented (1), ____ owned (2), ____ given (3) ___ other (specify) (4).
6. Do you have running water in your house? ____ Yes (1) ____ No (0)
6a. Do you buy water? ____ Yes (1) ___ No (2)
6b. Do you have a water tank? ____ Yes (1) ____ No (2)
6c. Do you use well water? ____ Yes (1) ____ No (2)

7. What kind of a toilet do you use? ____ pit latrine (1) ____ flush toilet (2)
_____ other (3)

8. Do you have electricity at home? ____ Yes (1) ____ No (0)

9. Do you have a phone (mobile/cellular) ____ Yes (1) ____ No (0)

10. Do you own a car? ____ Yes (1) ____ No (0)

Section C Knowledge of mother-to-child HIV transmission

Please tell me what you know about mother-to-child HIV transmission

1. Do you know that a baby can get HIV from the mother? ____ Yes (2)
____ Not sure (1) _____ No (0)

2. If yes to the above, how did you get the information? _____
2b. Does this information change how seek maternity health care Yes ___ No ___

3. How do you think babies get HIV? ____ in utero, ____during delivery, ___ while breastfeeding.

Section D Maternity health-seeking behavior

1. Do you have children? ____ Yes (1) ____ No (0)
1a. If yes, how many? _____
1b. Have you had any miscarriage/s _____ Yes (1) ____ No (0)

1c. Have you had a stillbirth/s? _____ Yes (1) ____ No (0)

2. When is your due date? _____
2a. Have you started prenatal care? _____ Yes (1) _____ No (0)
2b. If yes, where? _____
2c. How many visits have you made so far? _____
2d. If no, why not? _____

2. Did anybody help you decide when to start prenatal care? ____Yes (1) ___ No (0)
3a. If yes, whom? _____
3b. If no, whom? _____

4. Did anybody discourage you from seeking prenatal care? ____ Yes (1) _____ No (0)
4a. If yes, whom? _____

5. Where do you live? _____
5a. How do you get back and forth from the clinic?
_____ Walk
_____ Drive
_____ Public transportation
_____ Taxi

6. Do you like the health care center you are attending?____ Yes (1) ____No (0)
6a. Why do you like it? _____

6b. Why don't you like it? _____

6c. Why did you choose this particular health care center? _____

7. Have you decided where you are going to deliver your baby? _____ Yes (1) _____ No (0)
7a. If yes, where? _____
7b. If no, why not? _____

Section E Health care decision – making process

I am going to provide different conditions or situations, and I want you to tell me what you would do or where you would seek care.

1. Have you been sick with this pregnancy? _____ Yes (1) _____No (0)

2. If yes, what did you suffer from? _____
3. How long did the sickness last? _____
4. Was the sickness diagnosed? _____ Yes (1) _____ No (0)

4a. Who diagnosed the illness? _____

4b. If yes, what was the diagnosis? _____

5. How and where did you seek treatment? _____
6. How long did the treatment continue? _____
7. What treatment was effective? _____
8. When did you consider healed? _____
9. Have you been sick with a previous pregnancy? ____ Yes (1) ____ No (0)
10. If you do not feel well while pregnant, what would you do first, _____ and then, _____, if you do not get better _____
11. Tell me how you would treat anemia, first _____ , then _____, and if no relief _____
12. How about a fever, first _____, then _____ and if no relief _____
13. How about high blood pressure, first _____ then _____ and if no relief _____
14. How about body aches, first _____, then _____ and if no relief_____
15. If your "water" breaks what would you do first _____, and then _____
16. If you started labor pains, whom would you first tell? _____

16a. Why? _____

17. When do you think is the appropriate time to go to the hospital? _____
18. How would you get to the hospital if there were a problem? _____

APPENDIX C
CODING FOR QUESTIONNAIRE

Table E-1. Coding for Questionnaire

SECTION A - Demography	**Variable Name/Code**	**Variable Description**
1-3	Infonumb	Informant number 001-265
4-5	Age	Age in years as reported by informant
6-7	Ethncity	Ethnicity of the informant, Codes: 1 – Arab 2. Waswahili 3. Indian – Bulushi, Kochni, Bohra 4. Mijikenda – Digo, Duruma, Rabai, Giriama 5. Bajuni 6. Wajomvu/ Wachangamwe 7. Somali 8. Others
8-9	MrtlSt	Marital Status of Informant 1. Single 2. Married 3. Common law 4. Divorced/Separated 5. Widowed
10-11	MrtlUn	Marital Union of informant 1. Monogamy 2. Polygamy

Table E-1. Continued

SECTION A - Demography	Variable Name/Code	Variable Description
12-13	SPSRES	If in a polygamous relationship, how are the days spent between each household by spouse 1. One day 2. Two days 3. Three days 4. One week 5. Other If in a monogamous relation, but works out of Mombasa, also indicate by placing a 5.
14-15	WRKSTUS	Occupation of the informant. 1. Housewife 2. Teacher 3. Accountant 4. Secretary 5. Saleswoman 6. Seamstress 7. Hairdresser 8. Other
16-17	MEDINS	If informant has medical insurance coverage 0. No 1. Yes
18-19	EDUC	Highest level of education completed 1. None 2. Primary 3. Secondary 4. High/ Trade school 5. College
20-21	ISLEDUC	Islamic education completed 1. None 2. Basic (<5years) 3. Elementary (10-15 years) 4. Advanced (16 and more)

Table E-1. Continued

SECTION B Household characteristics	**Variable Name/Code**	**Variable Description**
22-23	SPSOCC	Informant's spouse or partner's occupation 1. Driver 2. Shopkeeper 3. Clerical 4. Carpenter 5. Businessman 6. Salesman 7. Builder 8. Other 9. Unemployed
24-25	SPSMINS	If spouse's job provides medical insurance 0. No 1. Yes
26-27	INSTYPE	Type of insurance provided 1. NHIF (national hospital insurance fund) 2. other 3. not sure
28-29	SPSEDU	Highest level of education completed by spouse or partner 1.None 2. Primary 3. Secondary 4. High/ Trade school 5. College
30-31	SPSISLED	Spouse's or partner's level of Islamic education 1. None 2. Basic (<5years) 3. Elementary (10-15 years) 4. Advanced (16 and more)

Table E-1. Continued

SECTION B Household characteristics	**Variable Name/Code**	**Variable Description**
32-33	OWNHOM	Socioeconomic status will be based on, Home ownership, 0. No 1. Yes
34-35	RNTHOM	Rental of home, 0. No 1. Yes
36-37	OTHER	Individuals whom neither own or rent the home, example those living in family, or company homes, 0. No 1. Yes
38-39	AVLWTR	Availability of water in the household, functioning tap water or well water, 0. No 1. Yes
40-41	BUYWTR	Individuals who have to buy water from neighboring water sources, 0. No 1. Yes
42-43	ELCTHM	Having electricity in the house, 0. No 1. Yes
44-45	YSCAR	Ownership of a car, 0. No 1. Yes
46-47	TLPHME	Ownership of a telephone, 0. No 1. Yes
48-49	ADHSH	Number of adults in the household, 1. 1 2. 2 3. 3 4. 4 5. 5 Other

Table E-1. Continued

SECTION C Knowledge of MTCT	**Variable Name/Code**	**Variable Description**
50-51	KMTCT	If informant has knowledge that a baby can get HIV from the mother, (2) Yes (1) Not sure (0) No
52-53	TFHIV	Has informant been tested for HIV, (0) No (1) Yes
54-55 56-57 58-59 60-61	YKMTCTA YKMTCTB YKMTCTC YKMTCTD	Informant's source of information, 1. Word of mouth in the community (0) No (1) Yes 2. School/college (0) No (1) Yes 3. Healthcare provider (2) No (3) Yes 4. Media (radio, TV, newspaper) (4) No (5) Yes
62-63	KCHMHB	If knowledge of MTCT change the informant's maternity health-seeking behavior, (0) No (1) Yes

Table E-1. Continued

SECTION C Knowledge of MTCT	Variable Name/Code	Variable Description
64-65 66-67	HIVTRBU HIVTRBR	Informant's opinion of how babies contract HIV, 1. In utero (0) No (1) Yes 2. While breastfeeding (0) No (1) Yes
68-69	HIVTRDEL	If informant has knowledge that babies contract HIV during delivery, 0. No 1. Yes 2. Not sure
70-71	CHILD	Does informant have children, (0) No (1) Yes
72-73	YCHILD	If yes to having children, how many, 0. None 1. One 2. Two 3. Three 4. Four 5. > five
74-75	MISSCAR	If informant has had a miscarriage, (0) No (1) Yes
76-77	YMISSCAR	If yes to the above, 1. one 2. two 3. three four

Table E-1. Continued

Section D	Maternity Health-seeking Behavior	Variable Description
78-79	STILLB	If informant has had a stillborn, (0) No (1) Yes
80-81	YSTILLB	If yes to the above, how many, 1. one 2. two 3. three
82-83	BIGPNC	When did the informant begin prenatal care, 0. None 1. less than 5 months 2. 5 months 3. Sixth 4. Seventh 5. Eight 6. Ninth
84-85	NUVISIT	Number of prenatal care visits made with documentation, 0. None 1. less than 6 2. six 3. more than six
86-87	RNOPNC	Reasons given for not seeking prenatal care, 0. None 1. Not sick 2. Not necessary 3. Too far 4. No transportation 5. No money 6. Housework 7. Relocate (either due to h.c.p or respondent) 8. Other

Table E-1. Continued

Section D	Maternity Health-seeking Behavior	Variable Description
88-89	PNCADV	Individual who assisted informant with prenatal care decision making, 0. Self 1. Husband 2. Mother 3. In-law 4. Friend 5. Other
90-91	DISCPNC	Has anyone discouraged informant from seeking prenatal care, (0) No (1) Yes
92-93	TRNSPRT	Informant's means of transportation to health care center, 1. Walk 2. Drive 3. Public transportation (matatu) 4. Taxi
94-95	HCLYKSA	Reason/s given for choosing a health care center, 1. Islamic institution (0) No (1) Yes
96-97	HCLYKSB	2. Distance (0) No (1) Yes
98-99	HCLYKSC	3. Health care providers (0) No (1) Yes
100-101	HCLYKSD	4. Affordable/Cost (0) No (1) Yes
102-103	HCLYKSE	5. Health care services (0) No (1) Ye

Table E-1. Continued

Section D	Maternity Health-seeking Behavior	Variable Description
104-105	HCLYKSF	6. Health problems (0) No (1) Yes
106-107 108-109 110-111 112-113 114-115	HCNEGA HCNEGB HCNEGC HCNEGD HCNEGE	Informant's negative opinion/s concerning health care centers, 1. Long waiting period (0) No (1) Yes 2. Health care providers (0) No (1) Yes 3. Too far – distance (0) No (1) Yes 4. Inadequate facility (0) No (1) Yes 5. Payment for services No (1) Yes
116-117	CHODEL	Informant's choice of delivery center, 1. At home – no assistance 2. At home – with TBA 3. Home – nurse/midwife/physician 4. Level 1 hospital (a level 1 hospital provides immediate care to the mother and basic care to the baby) 5. Level 2 hospital (a level 2 takes care of emergencies to both mother and baby) 6. Level 3 hospital (this includes advanced care to both mother and baby)

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BIOGRAPHICAL SKETCH

Fatima Soud was born in Mombasa, Kenya, where she lived most of her life. She moved to Nairobi where she started her nursing career at the Nairobi Hospital. On completion, she attended the Mater Misericordiae Hospital where she did her midwifery training. She is also registered as a nurse with England and Wales. She practiced as a nurse in Gainesville, Florida, while pursuing her doctorate degree.

In 1983, Soud worked with DeRance (Catholic) Foundation out of Milwaukee, Wisconsin. With this organization she traveled back to East and Central African countries where she assessed allocation and expenditure of grants and funds. These funds were given to build health related development projects.

In 1994-95 and 2002-03, Soud taught as a Swahili instructor at the University of Florida in the Department of African and Asian Languages and Literature.

In the summer of 2004, Soud did an internship at the Methods Research Section (Prevention Research Branch) in the Division of HIV/AIDS Prevention, at the Center for Disease Control and Prevention (CDC). She assisted in two studies; (a) an evaluation of the implementation of an evidence-based CDC behavioral intervention for HIV prevention program with the Texas Department of Health, and (b) a study of the current HIV transmission among men who have sex with men (MSM) in King County, Seattle.

Soud will begin a two-year on the job training as an Epidemic Intelligence Service officer with the CDC in Atlanta, Georgia, in July 2005.