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CHALLENGES AND CONSTRAINTS
ENCOUNTERED BY WOMEN AND
MIDWIVES DURING CHILDBIRTH IN LOW-
INCOME COUNTRIES

**Experiences from Angola and
Mozambique**

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To Bertil,
Bror Anders and Anna Sina

ABSTRACT

This thesis aimed to study the actual and perceived quality of midwifery practices during childbirth at peripheral and central health care levels in two low-income countries, Angola and Mozambique. Theoretical models interpreting women's and midwives' views have been developed.

Objectives: *Study I* evaluates midwives' use of an adapted model of the World Health Organization's partograph, a tool used to monitor the progress of labour.

Study II describes midwives experiences of working without immediate medical assistance.

Study III explores women's perceptions of care-seeking behaviour during childbirth.

Study IV observes perinatal midwifery care routines and examines partograph documentation.

Study V explores and develops a theoretical understanding of factors perceived to obstruct or facilitate midwives ability to provide quality of perinatal care.

Methods: *Study I:* A one-group pre-and post-test interventional evaluation of 100 partographs from one peripheral delivery unit.

Study II: Semi structured interviews with eleven midwives, analysed in a qualitative process comprising six steps.

Study III: Ten focus group discussions with pregnant and non-pregnant women, analysed using the grounded theory technique.

Study IV: Pre-and post intervention observation of midwifery care of 702 vs. 616 women during delivery and examination of the partographs.

Study V: In-depth interviews with 16 midwives, analysed using grounded theory technique. Educational interventions were designed and applied in study II and IV.

Results: *Study I.* Significant improvement of documenting was found in seven of the ten variables and more partographs were correctly documented in sample II compared to sample I. Missed transfers increased, however, in sample II.

Study II: The midwives experiences were sorted under four main areas: (1) Society/culture (2) Significant Others (3) Personal Self (4) Professional Self. Confidence was felt in the role as autonomous midwives but dependency on various factors such as the partograph, a functional referral system, peer support, community trust and continuous supervision was emphasised. Socio-economic hardships were identified as major stress factors for themselves and the women.

Study III: Women seemed compelled to "mould" their care seeking behaviour and four patterns, two 'avoiding' and two 'approaching' institutional care were identified. The salient features of each pattern were found to be "personal courage", "disempowerment", "discarding traditional practices" and "awareness and emancipation".

Study IV: No improvements were found in quality of care following the intervention. Common problems proved to be hypothermia and rare initiation of the graphic part of the partograph, which monitors progress of labour.

Study V: A process labelled “changing perinatal care management” emerged, which comprised four dimensions addressing aspects related to i) existing environment ii) midwives’ interaction with women in labour, iii) midwifery profession and iv) caring technology in order to improve quality of perinatal care. Communication and collaboration were identified as change agents.

Conclusions: The findings in this thesis indicate that midwives’ ability to provide quality of maternal and perinatal care in low-income and post-war affected countries is restricted by organizational, structural, educational as well as attitudinal aspects. Women in need of assistance during childbirth are negatively affected as a consequence of midwives reaction to the various constraints, which at times (Luanda) seems to oblige adverse care seeking behaviour. Midwives recognises the need for change, but change is found to be a slow and complex process, which requires engagement by all levels of the care chain. A model suggesting how to achieve quality of maternal and perinatal care in Safe Motherhood context is presented.

Keywords: care-seeking behaviour, dimensions of change, midwives, maternal and perinatal care, moulding, women, quality of care,

PROLOGUE

The origins of this project can be traced back to 1985 when my family and I moved from the beautiful peninsula of Bjäre in southern Sweden to Kessua, a United Methodist Mission situated in Malanje, the north eastern part of Angola. My husband engaged himself in the reconstruction of a run-down rural hospital and agricultural projects, whereas I was asked to shoulder the medical responsibility at the hospital. Through four years of more or less intensive civil war, we cared for patients of all categories, including complicated childbirths. The need for providing minimum care for pregnant women living in remote areas, led us, the Angolan colleagues and myself, to train traditional birth attendants and hospital nurses in midwifery. This experience was invaluable in my practice as the first midwifery advisor to Coordination of Obstetric Services in Luanda (CAOL), a maternal health project, which started in 1989 and was funded by Sida. This project, which looks at quality of midwifery practices in two different settings, initially emerged from empirical experiences within a maternal health care project in Luanda, the capital of Angola. The second part of the project explores quality of midwifery practices in a referral hospital in Maputo.

LIST OF PUBLICATIONS

This thesis is based on the following papers, which will be referred to in the text by their Roman numerals:

- I. Pettersson KO, Svensson ML, Christensson K. 2000. Evaluation of an adapted model of the World health Organization Partograph used by Angolan Midwives in a peripheral delivery unit. *Midwifery* 16, 80-88.
- II. Pettersson KO, Svensson ML, Christensson K. 2001. Lived experiences of Angolan autonomous midwives working in midwifery-led delivery units. *Midwifery* 17, 102-114.
- III. Pettersson KO, Christensson K, Engracia da Gloria Gomes de Freitas, Johansson E. 2004. Adaptation of health care seeking behaviour during childbirth. Focus group discussions with women living in the suburban areas of Luanda, Angola. *Health Care for Women International*, 25 (3) (in press).
- IV. Christensson K, Pettersson KO, Bugalho A, Cunha M, Dgedge C, Johansson E, Bergström S. The challenge of improving perinatal care in settings with limited resources (submitted for publication).
- V. Pettersson KO, Johansson E, Pelembe MF, Dgedge C, Christensson K. 'Mozambican midwives' views on barriers to providing quality perinatal care and their insight into devising change strategies (submitted for publication).

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LIST OF ABBREVIATIONS

A'NGL	Augusto N'gangula
AMRN	Africa Midwives Research network
CAOL	Coordenação do Atendimento Obstétrico de Luanda
FGD	Focus Group Discussion
FIGO	Federation of Obstetricians and Gynaecologists
GDP	Gross Domestic product
GT	Grounded Theory
HCM	Hospital Central De Maputo
HIV	Human Immunodeficiency Virus
HJM	Hospital José Macamo
HSR	Health System Research
IHCAR	Division of International Health Care Research
ICM	International Confederation of Midwives
INE	Instituto Nacional de Estatística
MCH	Maternal Child Health
MHC	Maternal Health Care
MINSA	Ministério de Saude, Luanda
MISAU	Ministério de Saude, Maputo
MLP	Maternidade Lucrecia Paim
MMR	Maternal Mortality Ratio
MOH	Ministry of Health
PDU	Peripheral Delivery Unit
RHR	Reproductive Health Research
SAREC	Sida's Department for Research Cooperation
Sida	Swedish International Development Cooperation Agency
SMI	Safe Motherhood Initiative
STI	Sexually Transmitted Infection
TBA	Traditional Birth Attendant
TFR	Total Fertility Rate
UN	United Nations
UNAIDS	The Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Family Planning
UNICEF	United Nations Children's Fund
WFB	World Fact Book
WHD	World health Day
WHO	World Health Organization

1 GENERAL BACKGROUND

The provision of quality care during childbirth is believed to make the difference between life and death or lifelong maiming for millions of women during childbirth (Koblinsky, 1995; Kwast, 1998b; Starrs, 1997a). One of the major components is the presence of skilled attendants, that is, physicians, midwives and nurses trained in midwifery (C. Cook, 2002; Donnay, 2000). Historical evidence show that the introduction of skilled midwives and good reporting systems are important factors for improving maternal and perinatal health in countries such as Holland and Sweden, who during the 19th century faced similar problems as today's low-income countries (Andersson, 2000; Högberg, 1985; Romlid, 1998; Schuitemacher, Gravenhorst, Van Geijn, Dekker, & Van Dongen, 1991).

Access to skilled care during childbirth is, however, extremely limited in many countries, in particular in African settings where coverage ranges from 6-86 percent (www.savethechildren.org/publications, 2003). Skilled assistance does, however, not vouch for quality of care. Review of epidemiological data, for example, provide quantitative evidence of health care provision, but does not indicate the quality of care offered. Research has indicated, though, that low quality of care negatively influences women's health seeking behaviour and causes many women to refrain from institutional care during labour and delivery (Jewkes, Abrahams, & Mvo, 1998)

1.1 MATERNAL AND PERINATAL HEALTH IN A GLOBAL PERSPECTIVE

A maternal death is defined as "the death of a woman while pregnant or within 42 days after termination of pregnancy, irrespective of the cause of death" (WHO/FRH/MSM.11, 1996). It is estimated that approximately 600 000 women continue to die every year from complications in pregnancy and labour, and more than 12 million women are chronically maimed as a result of a complicated childbirth (Koblinsky, 1995; WHO/UNFPA/UNICEF/WB, 1999). The principal causes of maternal deaths are abortion, eclampsia, haemorrhage, obstructed labour and puerperal infections. However, death may also result from existing diseases, which aggravates during pregnancy and diseases developing during pregnancy such as anaemia, tuberculosis, malaria and HIV/AIDS (Kelsey & Bergström, 2001). Most of these deaths are avoidable and closely linked to the quality of maternal health care services (Bergström, 2001; WHO/UNFPA/UNICEF/WB, 1999). However, poverty, women's low status and limited access to education are also considered as contributing factors (Kunst & Houwelling, 2001).

Perinatal mortality is a death, which includes late pregnancy, birth and the first week of life (WHO/FHR/MSM/96.7, 1996), and worldwide, the estimated numbers of perinatal deaths are more than 7 million per year (WHO/FHR/MSM/96.7, 1996). Birth asphyxia and hypothermia are common underlying causes of excessive perinatal morbidity and mortality, and represent a major health challenge in many low-income countries (Christensson, 1994; Dragovich et al., 1997). According to the World Health Organization (WHO), 98 percent of perinatal deaths occur in settings with limited

resources and reflects the complex socio-cultural and economic situation of each country (WHO/FHR/MSM/96.7, 1996; Yu, 2003). However, perinatal asphyxia and hypothermia, conditions that are directly linked to quality of care during childbirth, can be drastically reduced with improved midwifery practices (B. E. Kwast & S Bergström, 2001).

1.1.1 The safe motherhood initiative

The pertinent and famous question, “Where is the M in MCH” (Rosenfield & Maine, 1985) and the fact that a majority of global maternal deaths occurred in low-income countries (Kwast, 1991) contributed to the establishment of the Safe Motherhood Initiative (SMI), which was launched in Nairobi in 1987. Safe Motherhood embodies the philosophy that no woman should die or be harmed by avoidable pregnancy or childbirth related causes.

According to Mahler, the delay in recognising the huge disparity in maternal mortality ratios (MMR) between high and low-income countries was caused by sub-registration and/or no registration at all of deaths in many countries where it became evident that MMR was high (Mahler, 1987). The major interventions of SMI have included i) providing antenatal health care services, ii) providing skilled care during childbirth closer to the community, iii) improving availability and use of essential obstetric care for managing complications and iv) strengthening family planning services. In addition, research and monitoring of SMI projects has been encouraged (Donnay, 2000). After a decade of strategies and programmes aiming at improving maternal health care services, the mortality figures remain high in many low-income countries (De Brouwere, Tonglet, & Lerberghe, 1998).

1.1.2 Skilled assistance

In recognition of the slow progress, the main United Nations (UN) organizations concerned with Safe Motherhood issued a statement, which emphasised the importance of increasing the number of deliveries attended to by skilled attendants (WHO/UNFPA/UNICEF/WB, 1999). The terminology “health worker with midwifery skills” was introduced in 1997 (Starrs, 1997b) and WHO commenced to apply the concept ‘skilled attendant’. The definition of this cadre has been somewhat unclear, but according to the joint statement of WHO/UNFPA/UNICEF/World Bank (1999) it reads as follows: “The term ‘skilled attendant’ refers exclusively to people with midwifery skills (for example doctors, midwives and nurses) who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose, manage or refer complications”.

With the intention of strengthening national health systems and increasing the numbers of skilled attendants at birth, a new strategy called “Making Pregnancy Safer” was launched by WHO in 2000 (WHO, 2002). Whether this strategy will prove more successful than the previous SMI, remains to be seen. However, countries that rather recently have shown dramatic improvements in maternal health, such as Sri Lanka, Thailand, Cuba and Chile, have tended to focus on skilled attendance during childbirth (Maclean, 2003). Moreover, it is argued that in order to succeed, the magnitude and manageability of the problem must be recognised and acted upon by national governments. Furthermore, attention should be directed towards development of

professional first-line midwifery and second-line hospital delivery care (De Brouwere et al., 1998). Acknowledging that the whole area comprising skilled attendance is of considerable dimension and complexity, this thesis focuses on midwives as a skilled attendants and the environment in which the midwife functions.

1.2 MIDWIFERY

The International Confederation of Midwifery (ICM) and the Federation of Obstetricians and Gynaecologists (FIGO) has defined “midwife” as a “person who, having been regularly admitted to a midwifery educational programme, duly recognised in the country in which it is located, has successfully completed the prescribed course of studies in midwifery and has acquired the requisite qualifications to be registered and/or legally licensed to practise midwifery.

She must be able to give the necessary supervision, care and advise to women during pregnancy, labour and the postpartum period, to conduct deliveries on her own responsibility, and to care for the newborn and the infant. This care includes preventive measures, the detection the detection of abnormal conditions in mother and child, the procurement of medical assistance and the execution of emergency measures in the absence of medical help. She has an important task in health counselling and education, not only for the women, but also within the family and the community. The works should involve antenatal education and preparation for parenthood and extends to certain areas of gynaecology, family planning and childcare. She may practice in hospitals, clinics, and health units, domiciliary conditions or in any other service”.

The role of the midwife has globally been that of assisting women in normal childbirth. However, as demonstrated in the definition above, the area of competence has been expanded to include performance of emergency measures in the absence of medical help. The tasks that qualified midwives are expected to perform, however, vary extensively and the responsibility is probably heavier the more peripherally a midwife is located (Liljestrand, 1998). Moreover, midwives in countries such as Sweden, Holland and England enjoy the protection of legislative frameworks whereas the midwives in many low-income countries function without being legally protected (Maclean, 2003).

The importance of midwifery training in relation to maternal health has been on the agenda for the last decade (WHO/MCH.3, 1991; WHO/RHT/MSM/97.3, 1995) and WHO has elaborated various guidelines and manuals to facilitate acquisition of life-saving skills (WHO/FRH/MSM/96.1-6, 1996). Midwives, as other health professionals in a majority of low-income countries, are few and unevenly distributed (Kowalewski & Jahn, 2001) and midwifery training is often inappropriate and inadequate to confront the numerous challenges presented. Many midwives are, for example, forced to attend complicated cases and perform advanced obstetrical tasks for which they have neither formal nor informal training. At the very best, they have by “trial and error” reached a certain level of empirical skill, but without the necessary theoretical background (Kwast & Bentley, 1991). In contrast, it is also a fact that quite a few midwives from resource poor settings have developed education and research capabilities comparable to those of midwives in other parts of the world.

It is unclear if and how the new concept, ‘skilled attendant’ will affect the role of the professional midwife who is referred to as the ‘backbone’ of modern childbirth care

(Liljestrand, 1998) and as the ‘linchpin’ i.e. the link between various health professionals providing care during childbirth (Kwast & Bentley, 1991).

1.3 WOMEN’S UTILIZATION OF HEALTH CARE SERVICES DURING CHILDBIRTH

Despite huge efforts to improve maternal health for the poor and vulnerable women, the failure to reduce MMR is obvious. The lack of success can to a great extent be attributed to low quality and inadequate services on all levels (Donnay, 2000), but the persistent problem should also be viewed in relation to women’s care seeking behaviour during childbirth. Research indicates that more than 50 percent of all deliveries in low-income countries take place in home settings (Brieger, Luchok, Eng, & Earp, 1994; Van den Heuvel, De Mey, Buddingh, & Bots, 1999), and from urban slums in Dhaka, Bangladesh it is reported that 96 percent of all deliveries take place outside hospitals and health centres (Hoque & Selwyn, 1996).

A variety of factors appear to influence how women choose a place of confinement. Factors such as the distance to the nearest maternity service and the economic situation of the household are significant predictors for choosing homebirth (Hodgkin, 1996). Several studies have found that negative staff attitudes, including unfavourable language cause women to avoid institutional care (Amooti Kaguna & Nuwaha, 2000; Jewkes et al., 1998). Health facilities may also be avoided because women lack confidence in the services and are worried about the availability of essential drugs and equipment (Opuko et al., 1997). In addition, when the health personnel demand payment for their services, which appears to be a frequent occurrence, it has a negative impact on women’s use of institutional care (Gilson, 1997; Nahar & Costello, 1998).

Social influences are also considered to impact health care seeking behaviour during childbirth. The husband, who is regarded as ‘the money-maker’, may oppose women’s attempt to seek institutional care. Other members of the family, in particular mothers in law, also exercise their authority over women’s choice of delivery place (Amooti Kaguna & Nuwaha, 2000). Furthermore, insensitivity to childbirth traditions has been found to discourage women who adhere to cultural traditions from seeking assistance during labour (Chipfakacha, 1994; Olaniran, Offiong, Ottong, Asuquo, & Duke, 1997; Yaffre & Prual, 1994). According to Ammoti et al (2000) the status of the actual pregnancy may also influence women’s decision-making process. If the health personnel inform a woman that her pregnancy is considered normal, she may decide to deliver at home.

1.4 CHILDBIRTH CARE AMONGST CONFLICT AFFECTED AND DISPLACED POPULATIONS

The number of low and high-intensity conflicts throughout the world continues to grow, and so do the populations fleeing the subsequent violence and political persecution. Of more than 50 million displaced people, approximately 26 million are international refugees and another 25 million are internally displaced in 50 countries of conflict (www.idpproject.org/IDP_table.htm, 2002).

Conflict-affected populations pose substantial challenges to reproductive health due to the severe upheavals experienced, in particular by women. However, until the mid-

nineties, the maternal health care services to these populations were sadly neglected (Wulf, 1994) and little is known about the impact of conflicts on the perceptions and needs of women in such circumstances. Moreover, conflict-affected populations are not a homogeneous group as some are newly displaced, others live in camps whereas many, as in Luanda and Maputo, have more or less permanently settled in suburban communities (Palmer, 1998).

Many women have been separated from their husbands and families, and the number of female-headed households may increase drastically as it did in Rwanda, Angola and Mozambique (Baden, 1997; Eriksson, 1996; K Pehrsson, 2000). The economic responsibilities and the perceived difficulties in assuring safety for themselves and their children, pose threats to women that may endanger their reproductive health and their lives. Women often become targets of sexual abuse and sexual trade in exchange for survival and are consequently at high risk of acquiring STI/HIV (Palmer, 1998). Another major concern is the massive psychological trauma experienced by displaced populations. Lack of safe and supportive environments for emotional healing, insecure dwelling, a sense of alienation and mistrust may have a long-term impact on women's health and use of health care services (WHO/RHR/00.13, 2000).

The assumption that dislocated women face an increased risk of a negative outcome of pregnancy could be supported by examination of factors contributing to the high MMRs in countries experiencing conflicts, for example Afghanistan and Sierra Leone (WHO/FRH/MSM.11, 1996). The majority of studies have focused on the perinatal outcome whereas obstetric complications and maternal mortality are less commonly reported (McGinn, 2000). However, recent information from Afghanistan indicates that maternal mortality increased dramatically since the recent political upheaval and that maternal mortality is likely to be more common among new refugees (Bartlett et al., 2002). Some studies have compared pregnancy outcome between the displaced and the host population and found that it did not differ; in fact, it was even better in some cases. The primary explanation proffered for this is that populations living in refugee camps have better access to care provided by donor agencies than people living in the community (Hynes, 2002; McGinn, 2000).

Poor outcomes of pregnancy and childbirth are common in many war-affected low-income populations and may be worse in the active stages of the conflicts. However, once stabilization occurs, and the displaced populations are integrated into the community, it is proffered that the reproductive health status most probably will be identical to that of the host population in neighbouring countries (McGinn, 2000). It is interesting to note that this finding is not consistent with the experience of refugee and asylum seekers in England, whose risk of death during childbirth appears to be higher than the indigenous population (Briscoe, 2003). Findings from Sweden indicate that even perinatal mortality is higher among women of foreign origin, in particular from sub-Saharan Africa and that these deaths are linked to sub optimal performance of health care routines in the Swedish perinatal care system (Essen et al., 2002; Essen, Hansson, Ostergren, Lindquist, & Gudmunsson, 2000)

1.5 COUNTRY SPECIFIC BACKGROUND

1.5.1 Angola

Located on the Atlantic Coast of southern Africa, Angola is bordering Namibia to the south, Zambia to the east and Congo (former Zaire) to the north. With its 486,213 square miles, it covers the areas of England, France and Spain together. Angola was colonised by Portugal for close to 500 years, and Portuguese is therefore the official language. Independence was gained in 1975 after 10 years of liberation war, which turned into another 27 years of civil war. The death of the Unita leader in 2002 led to cease-fire and reconstruction of the country is currently underway.

The population estimates are approximately 13.5 millions and according to recent statistics, the Angolan population is growing by 2.9 percent per year. The total fertility rate is 7.2 and the crude birth rate is 51/1000 populations (UNAIDS/WHO, 2002). Luanda, the capital city, which is located on the coast, has approximately 4.5 million inhabitants (CAOL, 2001). A majority of the population are internal migrants, of which many are unemployed but active within the informal market and petty trading (K. Pehrsson, 2000).

The civil war had a devastating effect on the maternal health situation (Liljestrand, Dahlbäck, & Åkesson, 1993; Salomonsson, 1995; Schaidler, Ngonyani, Tomlin, Rydman, & Roberts, 1999) which is illustrated for example by the estimated nationwide maternal mortality ratio (MMR), 1500/100 000 per live births (International Planned Parenthood Federation, Angola country profile 2002; (WHO/FRH/MSM.11, 1996). Access to reliable statistics, however, was only found in Luanda where institutional MMR has been monitored during a ten-year period. The ratio appears to fluctuate with periods of less intensive war and is cited to vary between 823 – 2070/100,000 live births (CAOL 1992-2000). The nationwide infant mortality rate is estimated to range between 126-191/1000 (UNAIDS/WHO, 2002; WFB, 2000), compared to the institutional perinatal mortality for Luanda, which is 44/1000 live births (CAOL, 2001).

A study in 1990 reported that the overall prevalence of HIV-1 and HIV-2 in six of Angola's 18 provinces was 14.2 percent (Santos-Ferreira et al., 1990). According to WHO, however, the adult HIV prevalence in 2001 was estimated to 5.5 percent, which is probably an underestimation. The high incidence of HIV/AIDS in neighbouring countries such as the Democratic Republic of Congo (UNAIDS/WHO, 2002), from where many refugees returned after the war, may influence the spreading of the virus in Angola. Another risk factor is prostitution, in particular among adolescents, which aggravated due to the movements of troops throughout the country and the concentration of people who live in extreme poverty in and around the provincial capitals (K. Pehrsson, 2000).

The national coverage of antenatal services in Angola is approximately 25 percent whereas only 17 percent seek institutional care or skilled attendance during childbirth (WHO/RHT/MSM.28, 1996). Use of the maternal health care (MHC) services in Luanda appears only to be slightly better. In 2000, approximately 126,776 (44.6%) of expected primiparas attended antenatal services. However, only 63,049 (23.7 %) of expected deliveries were institutional. Of these, 51 percent were conducted at the peripheral delivery units (PDUs) (CAOL, 2001). To my knowledge, no statistics are available from the private MHC services. In Angola, the latest figure of internally

displaced populations is 3.5 million (www.idpproject.org/IDP_table.htm, 2002) and a majority of these are considered to be residing in the province of Luanda. Due to repetitive outbreaks of war, people seem to have settled permanently in the area around the capital Luanda, and former refugee camps have turned into permanent villages (CAOL, 2001).

1.5.2 Mozambique

Located on the Indian Ocean in East-Africa, Mozambique has a coastal line, which extends for 2,515 km and shares borders with Tanzania, Malawi and Zambia to the north and Zimbabwe to the west. In the south and southwest, Mozambique borders with South Africa and Swaziland. Mozambique covers an area of 801,590 km², equivalent to the combined area of Sweden and Norway. The most recent population census was performed in 1997 (INE, 1997) and was estimated at 16.1 million. Estimates for 2001, however, claimed that the population had reached 19 million, indicating a rapid population growth. The total fertility rate (TFR) 6.3 and the crude birth rate was 45/1000 (UNAIDS/WHO, 2002).

Maputo, the national capital, is located in the southern province and has approximately 1 million inhabitants, whereas the province of Maputo accounts for another 2 million (INE, 1997). In contrast to Luanda, the population in Maputo decreased somewhat following the war due to repatriation of internally dislocated populations.

Mozambique was colonized by Portugal for 500 years, and despite the presence of five major national languages, Portuguese remains the officially spoken and written language. Independence was gained in 1975 after a 10-year liberation war, but Mozambique faced a long and gruelling civil war, which only ended in 1992 (Baden, 1997).

Maternal and neonatal ill health conditions are regarded as the largest contributors to the country's burden of disease, and the impact of adult HIV/AIDS prevalence, which was estimated at 12.6-14.4 percent, is expected to worsen the situation considerably in the near future (MISAU, 1999; UNAIDS/WHO, 2002). The World Health Organization estimates of MMR is 1500/100,000 live births (WHO/FRH/MSM.11, 1996), but according to Ministério de Saúde (MISAU) (1999), these figures range from 500 – 1500. The perinatal mortality is estimated to 90/1000 (WHO/FCH/RHR, 2001) and the IMR ranged from 137-139/1000 (UNAIDS/WHO, 2002; WFB, 2000). These figures, however, are predicted to increase by 20 percent by 2005 due to the AIDS epidemic (UNDAF, 2000).

Approximately 54 percent of pregnant women in Mozambique receive antenatal care whereas only 27 percent deliver at institutions (WHO/RHT/MSM.28, 1996). However, there are great disparities in access to services between rural and urban areas. According to the Ministry of Health (MISAU), 80-90 percent of pregnant women in Maputo are enrolled in the antenatal clinics but only a fraction of pregnant women in the rural areas, particularly in the most disadvantaged provinces, have access to antenatal care (MISAU, 1998). The quality of MHC services is perceived to suffer, as health workers with inadequate skills often provide care in the rural settings. However, suboptimal care is also a result of inadequate resources and inferior management capacity at district, provincial and national levels (MISAU, 1998).

One of Africa's largest displacements of population, caused by armed conflict was that of Mozambique from 1977-1992. The resettlement rate was above 90 percent in several provinces, whereas only 24 percent of the internally displaced in the capital Maputo returned to their places of origin. Despite the abject poverty existing in the slum areas surrounding Maputo, people seemed to prefer this to the rural areas, as access to water and basic services such as health care and education was perceived to be relatively better (Deng, 1997).

There are no accurate available data to substantiate the impact of war and displacement on maternal mortality in Angola and Mozambique. However, the lack of access to care, poor nutrition, sanitation and insecurity as well as violence against women are all likely to have contributed to poor maternal health and high maternal mortality ratios in Angola as well as in Mozambique. In Mozambique, for example, the coverage of maternal tetanus vaccination was reduced by more than 50 percent during the war. Moreover, health and maternity units in Mozambique were specifically targeted and more than 1000 primary health care units were destroyed by fighting and looting (Palmer, 1998).

Selected demographic and socio-economic indicators comparing the two countries are presented in Table 1. Caution is needed as figures vary according to the source.

Table 1. Selected basic demographic and socio-economic indicators and estimates for Angola and Mozambique. Sources: (UNAIDS/WHO, 2002; WFB, 2000)

Indicator	Angola	Mozambique
Area (km ²)	1.246.700	810.590
Population	13.5 million	18.6 million
GDP per capita	1000	900
Unemployment rate (%)	>50	21
Inflation rate (consumers prise)	110	10
Literacy female rate (%)	28	26
Literacy male rate (%)	56	57
Crude birth rate (per 1000)	51 (46.2-51)	45 (25.1-45)
Crude death rate (per 1000)	20	22
Annual population growth (per 1000)	2.9 (2.2-2.9)	2.3 (1.1-2.3)
Life expectancy at birth (years) female	36.13	30.98
Life expectancy at birth (years) male	37.83	31.63
Infant Mortality Rate (IMR/1000)	126 (126-191)	137 (137-139)
Maternal Mortality Ratio/100.000 live births	1300 (1300-1800)	980 (680 –1500)
Total Fertility Rate (TFR – number of children per woman)	7.2 (6.4-7.2)	6,3 (4.7-6.3)
HIV/AIDS prevalence (adult) (%)	5.5	13
Number of midwives/100.000 inhabitants	4.3	No estimations
Number of obstetricians /100.000 inhabitants	7.7	No estimations
Proportion of deliveries attended by a skilled health worker	22.5	44.2
Government budget spent on health care (%)	6.4 (3.5-6.4)	11.1 (3.9-11.1)

2 CONCEPTUAL FRAMEWORK

2.1 HEALTH SYSTEM RESEARCH

According to Varkevisser et al, the focus of health system research (HSR) is to improve the health of a community by enhancing the efficiency and effectiveness of the health system as an integral part of the overall process of socio-economic development (Varkevisser, Pathmanathan, & Brownlee, 1991). The WHO defines HSR as research comprising “*all activities whose primary purpose is to promote, restore or maintain health*”(WHO, 2000). The basic functions of any health system involve delivery of health services, resource generation, financing and stewardship. The latter is a recent notion in health policy and comprises a major role of national governments, including the setting of rules and ensuring both public and private sector compliance (Lindstrand, Bergström, Stenson, & Rosling, 2003).

However, health systems, public as well as private, have always been and will always be affected by political decisions and they are likely to react to various social and economic changes (Bogg, 2002). Poor African countries have, for example, never acquired the capacity to finance the so-called “Free Health Care” systems. One consequence of this has been low salaries, drug selling and demand for remuneration by the health personnel (Lindstrand et al., 2003).

Health system research has been widely applied within MHC services, in particular in low-income countries. Areas such as women’s experiences, midwives’ role in MHC services, access to care, inequity and inequality of care, cost of care, forms of care and national plans for care are included in this research. This thesis is related to HSR and primarily focuses on the quality of midwifery practices at the peripheral and the central level of the maternal health care chain during childbirth.

2.2 QUALITY OF CARE

In this thesis, I have looked at quality of care during childbirth from the perspective of both women and midwives. Quality of health care has a variety of definitions, of which Donabedian’s is probably the most used and accepted. He states that the degree of quality is the extent to which care provided is expected to achieve the most favourable balance between risks and benefits (Donabedian, 1980). The possibility of providing quality care in a low-income setting differs substantially from that of high-income countries, and I therefore find that the definition by Roemer and Montoya-Aguilhar corresponds better to the context of this thesis. They state that quality of care consists of the proper performance of interventions that are known to be safe and affordable to the society in question, and which have the ability to produce an impact on morbidity, disability and mortality (Roemer & Montoya-Aguilar, 1988). WHO appears to have combined the above definitions and arrived at the following conclusion when defining quality of care; “the extent to which the care provided, within a given economic framework, achieves the most favourable outcome when balancing risks and benefits” (Heideman, 1993).

According to WHO, the key determinants of quality include technical competence of providers, interpersonal skills, availability of basic supplies and equipment, physical facilities and infrastructure, linkages to other health services and a functional referral system. Important though as these components may be, the services must be available, accessible, affordable and acceptable to the clients in order to be utilised (WHD.98.8).

Furthermore, factors such as the political environment, financing, socio-cultural factors and education are also determinants of quality of care (Kwast, 1998a). For years, the focus of the SMI has been on the coverage of MHC services and less attention has been paid to the content and the quality of the services. As a result, it is not uncommon for data that indicate widespread coverage to coexist with high levels of maternal and neonatal mortality and morbidity. The quality of MHC services has therefore received more attention in the last decade, and the underlying philosophy is to ensure that health care providers, in particular midwives, have the knowledge, skills and resources that are responsive to the client's individual, social, cultural and medical needs.

Studies on quality of care from low-income settings indicate severe deficiencies in all of the determinants mentioned (Christensson, 1994; Christensson et al., 1988; De Brouwere & Lerberghe, 2001; Faxelid, 1997; Kowalewski & Jahn, 2001). Some point principally to inappropriate staff attitudes and lack of staff whereas others indicate shortage of medical supplies and inadequate facilities. Barriers to quality of care, however, are to a great extent lack of and stewardship of finances as well as a falling trend in health care expenditures and education (Kwast, 1998a).

What constitutes quality of care is regarded as context-specific and varies from place to place and even from individual to individual (AbouZahr, Vlassoff, & Kumar, 1996). However, quality of care is also culture-specific, particularly related to childbirth, which is a significant event influenced by social norms and expectations of the individual woman, her family and the community (Maimbolwa, 2004). The concept *culture congruent care*, was introduced by Leininger in her nursing theory of culture care and diversity (Leininger, 1991). She states that "*care is largely culturally derived and requires culturally based knowledge and skills for efficaciousness*", p.6 (Leininger, 1991). Data collection for the studies comprising this thesis was not guided by but certainly influenced by the Leininger theory, which has been widely used to study women's ideas of health and health care (MacNeil, 1996; Miller & Petro-Nustas, 2002; Morgan, 1996).

When addressing aspects of quality of care related to maternal and perinatal services, in particular among post-war and low-income populations, the right to equal care and equity in care must be addressed. According to the Universal Declaration of Human Rights, article 25 (2), "motherhood and childhood are entitled to special care and assistance". The Economic Covenant, article 10 (2) also states that "special protection should be accorded to mothers during a reasonable period before and after childbirth" (R. J. Cook & Dickens, 2002). This implies that basic and appropriate care shall be provided to all who need it regardless of the individual's social, ethnic, religious or economic background. *Equity* is defined as a normative concept comprising "fairness" and "principles of justice" (Oxford, 1980) and is closely associated with the notion of social justice (D. Gwatkin, 2002). Whereas *equality* implies that all individuals enjoy similar health care irrespective of whether he/she needs the care more or less (Hengjin, 2000), *equity* is according to the definition above essentially about *fairness* and implies that the most vulnerable groups within a society require access to more care than the healthier part of the population do.

Fairness thus appears to be the most appropriate concept when discussing the quality of midwifery practices in the context of this thesis.

3 AIMS

3.1 GENERAL AIM

The overall aim of this thesis is to describe the quality of midwifery practices during childbirth in Angola and Mozambique and to analyse processes perceived to influence the midwives abilities to provide care as well as women’s health care seeking behaviour during childbirth.

3.1.1 Specific aims

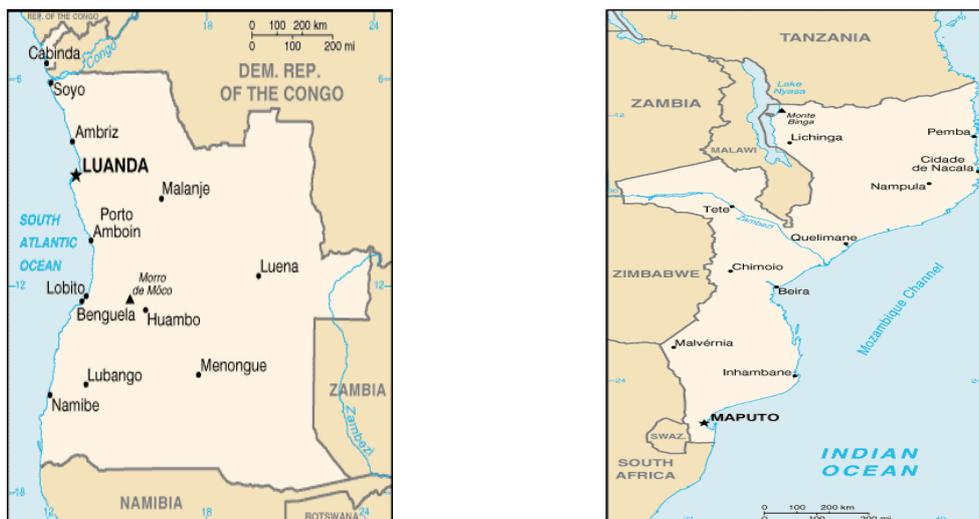
- To evaluate midwives’ use of an adapted model of the the partograph in a peripheral delivery unit in Luanda (I)
- To describe PDU midwives’ experiences of working autonomously (II)
- To explore and analyse factors influencing women’s health care seeking behaviour during childbirth in Luanda (III)
- To observe and analyse midwifery perinatal care routines and partograph documentation in Mozambique (IV)
- To explore and analyse Mozambican midwives’ perceptions of factors obstructing or facilitating their potential to provide quality perinatal care (V)

4 METHODS AND SUBJECTS

4.1 STUDY SETTINGS

Data for this thesis were collected from the national capitals of Angola and Mozambique and Mozambique, whose locations are depicted in the maps below.

Fig.1 Maps of Angola and Mozambique



4.1.1 Luanda

Luanda is divided into nine suburban and urban areas and there are approximately 265,500 deliveries/year, with an average of 720 per day (CAOL, 2001). The institutional deliveries have increased successively from about 30 to 51 percent as a result of the opening of PDUs, the first one in 1991. A decrease in low-risk deliveries was also noted at the central maternity hospitals, Maternidade Lucrecia Paim and A. N'gangula, albeit not to the extent expected (CAOL statistics 1993-99). Despite the increase in institutional deliveries, these only amount to 63,723 (22.3 %), which leaves the expected number of home deliveries at approximately 217,116 (77.3%) (CAOL, 2001).

In 1994, the number of nurses attending the MHC services in Luanda was estimated to be 355 of whom 149 were professional midwives and 206 maternal health nurses (MINS/CAOL, 1994). These figures, however, have most likely changed due to the midwifery education that started in 1998, but also due to training of more SMI nurses to staff the increasing numbers of PDUs. Since the obstetricians at the time of these studies were strictly located in the referral hospitals, guidelines were elaborated for referral during pregnancy and labour. The PDUs were connected to the referral hospitals through radio communications 24 hours a day and transfer was facilitated via an ambulance service. The midwives working in the PDUs were specifically trained to function without direct medical assistance and were supplied with essential drugs and medical equipment. Staff from the provincial maternal health programme offered supervision and feedback on documented partographs, a tool for monitoring progress of labour, and arranged educational seminars.

Due to low salaries, which never kept in pace with the inflation, many midwives abandoned their workplaces in search of livelihood. The CAOL project, financed by Sida, therefore implemented an incentive programme in order to motivate quality services and assiduity. Initially these incentives, which started at the rate of

5 US\$ per shift, were only given to the PDU midwives, but eventually the programme expanded to include midwives at the referral hospitals. The programme had a significant impact, in particular on manning the PDUs and on the PDU midwives' performances. However, the government salaries remained low and in fact decreased to 10-20 percent of the incentives (Brolin & Wessel, 1999). Moreover, the incentives continuously decreased over the year, partly as a result of the increased numbers of midwives to share the sum allotted, but also due to a phasing out of this part of the MHC project (CAOL, 2001).

Deliveries taking place in domestic settings were mostly assisted by a family member or by a friend. Attendance by traditional birth attendants (TBA) was not very common in central Luanda but some TBAs were reportedly active in the rural parts of the province.

Studies I - III were conducted within seven of the nine PDUs established in Luanda and in some local communities pertaining to the same areas.

4.1.2 Maputo

Maputo is divided into five urban districts and has approximately 20 PDUs attending to normal deliveries 24 hours and two general hospitals where caesarean sections can be performed during daytime. Obstetric risk and emergency cases are referred to Hospital

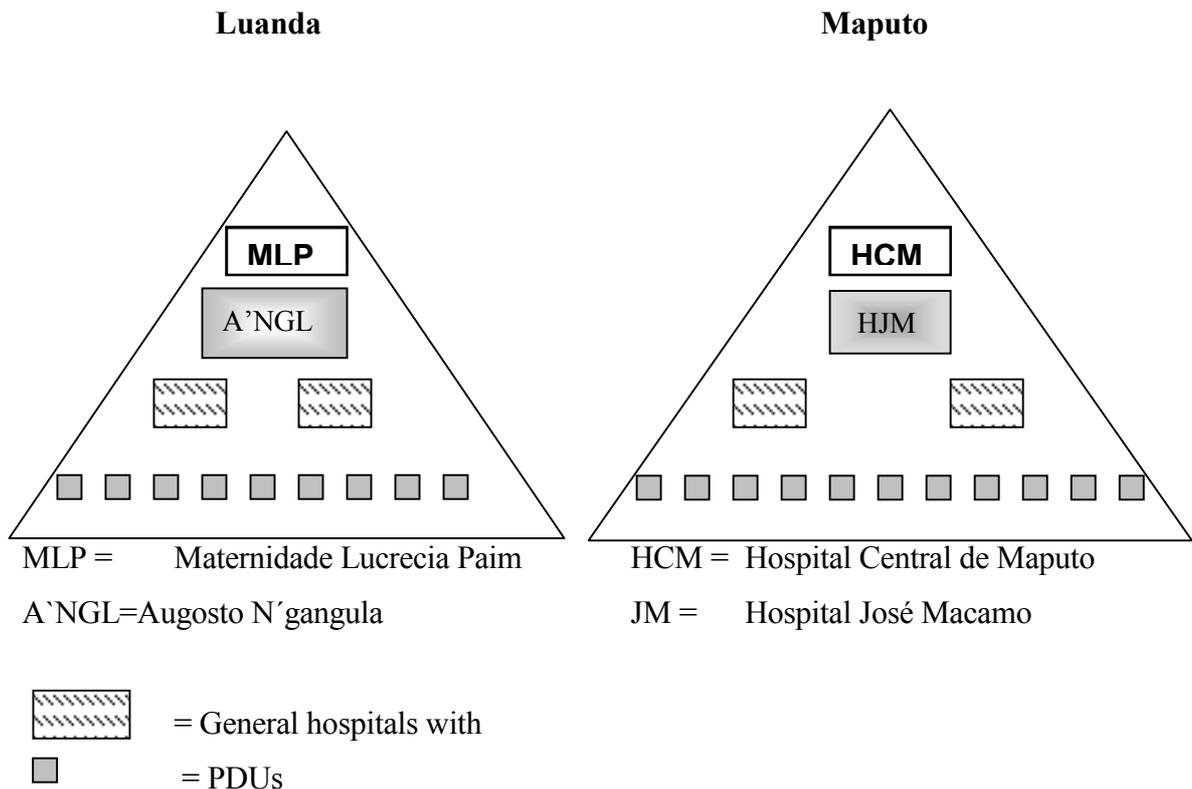
Central de Maputo (HCM) and recently also Hospital José Macamo, which has become a 24-hour referral hospital for the Maputo area.

The research for studies IV-V was conducted at HCM, which is also a university research and training institution, and a referral unit for the National Health Service. The Department of Obstetrics and Gynaecology has 290 beds. In 1997, the number of deliveries at HCM was 17,534. The MMR was 400/100,000 live births and the perinatal mortality was 63,5/1000 births (HCM statistics).

A total of 33 midwives worked in shifts at various ‘stations’ such as the admission room, the observation room, the ‘eclamptic’ room, the dilatation room, the labour and neonatal room and at the caesarean section room in the surgery department. An incentive/reward system has been referred to among colleagues at HCM; however, it appears to be a local and irregular occurrence compared to the all-inclusive and regulated system in Luanda.

The model of obstetric care coordination, which includes establishment of PDUs was adopted from Maputo and implemented in Luanda (Figure 2).

Fig. 2 The Maternal Health Care Systems:



5 OVERALL PROJECT DESIGN

In this project, we have applied qualitative as well as quantitative research methodology to describe and explore phenomena related to the reality experienced by women and midwives during childbirth. The combination of the two research

methodologies is attributed to the fact that questions, which emerged from one study, guided the design of the following study.

The theoretical foundation for quantitative research rests on positivism, which views knowledge as independent of time and context. Furthermore it can be measured and hypothetically tested and is consequently regarded as objective and realistic (Burns & Grove, 1993). Qualitative research, which aims at uncovering, understanding and analysing human behaviour from the perspective of those being studied (P. Svensson & B. Starrin, 1996), has its theoretical base in constructivism i.e. interpretivism (Scwandt, 1994). The truth is not considered to be one solely, but relies on the reality, which is dependent on time, place and context. Knowledge is created and interpreted in the interaction between researcher and participants, and therefore regarded as subjective and relativistic (Stenberg, 1999).

Combining qualitative and quantitative dimensions is by many researchers regarded as useful, particularly in health care research where reality is a mix of socio-economic, cultural, political and organizational factors (Faxelid, 1997; E. Johansson, 2000).

6 STUDY POPULATIONS

In *study I*, 100 partographs, an adapted model from the WHO partograph, were randomly selected at one PDU in Luanda. Fifty records composed sample I and sample II respectively. This PDU had at the time approximately 1500 deliveries/year, and the sample size, approximately 20 percent, was calculated on available records in the study periods.

In *study II*, eleven out of 33 midwives from three PDUs in Luanda, were interviewed. The midwives working dayshift were purposely selected, but the opportunity of being included was equal for all midwives as the working schedule was rotational. The PDUs chosen were the first to be opened, and were situated in the most densely populated areas.

In *study III*, ten focus group discussions (FGDs) were conducted with women residing in seven of the nine suburban areas in Luanda, six in the PDUs and four in the community. All groups included women, who had experienced childbirth only at home, only at institutions and both at home and at institutions. Participants originating from other provinces in Angola i.e. internally displaced women and participants with various civil statuses were represented in all groups. In eight groups the participants were unacquainted whereas women in two of the groups were somewhat familiar with each other. Selection of the FGD participants was conducted in line with theoretical criteria (B Glaser, 1978; Strauss & Corbin, 1998). The ruling principle in this sampling method is that ideas and concepts emerging from the preceding discussion guide which group to approach and what questions to pursue. The number of groups and the selection of participants were therefore not planned in advance but influenced by the factors described above, the point where theoretical saturation emerged was reached i.e. when no new data emerged in the analysis and also practical aspects such as the time

limit. Six individual interviews were conducted as part of the theoretical sampling (Strauss & Corbin, 1998).

Study IV took place at the Maputo Central Hospital labour ward. Seven hundred and two and 616 women in labour respectively were included in the pre- and post-intervention observation samples, which comprised consecutive cases of expected vaginal and non-instrumental delivery, the midwives' area of responsibility.

In *study V*, sixteen of 33 midwives from the delivery ward at HCM were purposely selected to be interviewed. The inclusion criteria were a) being a midwife based on the labour ward and b) being available for an interview during the data collection period. Selection of informants was performed during dayshifts; however, all midwives were on a rotating work schedule and thus had equal opportunity of being selected. A summary of the study population is given in Table 2.

Table 2. Study design, subjects, study site and methods in the five studies.

Paper	Study Design	Subjects	Study site	Methods
I.	Descriptive, quantitative. One-group, pre- and post-test evaluation	100 partographs	One PDU in Luanda	Partograph review and evaluation
II.	Descriptive, qualitative	11 midwives	Three PDUs in Luanda	Semi structured interviews
III.	Explorative, qualitative	48 women	PDUs and local communities in Luanda	FGDs, grounded theory technique
IV	Descriptive quantitative Pre- and post-intervention evaluation	702 vs. 616 women in labour	Maputo Central Hospital, maternity ward	Pre- and post-intervention observations. Partograph review and evaluation
V.	Explorative, qualitative	16 midwives	Maputo Central Hospital maternity ward	In-depth interviews, grounded theory technique

6.1 RESEARCH ASSISTANTS

In order to link findings to the setting in which the problem was identified and where the research would be conducted, the research assistants in Luanda were mainly staff midwives at the selected PDUs. The number of staff midwives who participated in planning and facilitating the studies grew as the number of PDU units increased (I-III). In order to conduct the FGDs, a licentiate midwife trained in research methodology was asked to function as the moderator, whereas a midwife from CAOL was asked to serve as the assistant moderator. The use of an Angolan moderator implied that no interpreters were needed and women appeared to be at ease with a person who could

relate to them linguistically as well as culturally. Several sessions on FGD methodology were held prior to data collection.

In Maputo, the research assistants were midwifery teachers trained by the local research team in the direct, non-participant observation method (IV). For study IV, appropriate logistics and chronologically prepared partographs were provided by two staff midwives who moreover assisted in releasing midwives for the in-depth interviews conducted for study V. The staff midwives also participated in the analysis of the interviews, which was preceded by sessions on grounded theory and open coding.

7 DATA COLLECTION METHODS

7.1 EXAMINATION OF THE PARTOGRAPH (I, IV)

The partograph, a graphic recording of the progress of labour and monitoring the salient features of the woman and the foetus during labour, has been used since the 1970's. The main purpose of this document is to detect labours that do not progress normally, to indicate when augmentation of labour is appropriate and to recognise cephalous-pelvic disproportion long before labour becomes obstructed (Philpott, 1972). If correctly used, the partograph increases the quality and regularity of all perinatal and maternal observations and serves as an early warning system of complicated deliveries (WHO/MCH/88.3, 1988). The WHO model of the partograph represents a synthesised and simplified compromise including the best features of partographs originating from different parts of the world and is based on the following principles: i) cervical dilatation should be one cm/hour, ii) lag time should be no longer than 4 hours between slowing of labour and call for action (WHO/MCH/88.3, 1988).

In *Study I*, the one-group, pre-and post-test evaluation was applied. Data were collected on 10 variables from the graphic part of an adapted model of the WHO partograph, eight of which reflected the midwives performance in recording observations such as cervical dilatation on graph, foetal heart rate and descent of presenting foetal part. Variable nine and ten reflected our evaluation of the midwives' interventions; referral based upon data accumulated on the partograph in relation to established guidelines and the midwives' performance of monitoring the foetal heart rate i.e. the correspondence between the foetal heart rate and the newborn's condition as evaluated by Apgar score.

The instrument designed to collect these data was a square-lined sheet, which horizontally covered data from 25 records. The partograph variables (1-10) and demographic variables appeared vertically in the left margin. One point was given for plotting, providing it was correctly done, and zero for missed or incorrect plotting.

The intervention took place during a three months period and comprised the following phases; i) analysis and identification of existing difficulties in partograph use for each midwife, ii) preparation of didactic material (wooden plates with circles from 1-10 cm, enlarged design of the partograph), iii) administration of theoretical and practical lectures in groups (mannequin, ultra-sound dopler, partograph and clinical teaching) and iv) individual supervision and feedback.

Data were also collected from the partographs in *Study IV*. Forty-two variables, including i) the admission, ii) the graph, iii) the delivery and iv) the newborn period were manually registered on a sheet containing all variables.

The instrument, used to collect data, was designed in a similar fashion to the one applied in study I. However, when data were entered for analysis in an Epi-info statistical programme, the variables were recoded using numbers and letters. The partographs were examined consecutively and codes for each variable were entered into the respective column for each record.

7.2 SEMI-STRUCTURED INTERVIEWS (II)

Semi-structured interviews are conducted on the basis of a loose structure consisting of open-ended questions that define the area to be explored, at least initially, and from which the interviewer or interviewee may diverge in order to pursue an idea or response in more detail (Pope & Mays, 1999). We found that this method was appropriate for study II, as we sought answers to specific questions that emerged from study I. Semi-structured interviews also allow probing (Burns & Grove, 1993), which suited our purpose to explore how midwives experienced their working situation without immediate medical assistance.

A thematic interview guide was developed, which covered aspects such as the midwives and the population, the midwifery profession, the significance of the partograph and constraints experienced. Probing was done according to each respondent's answer, which is why the interviews did not follow an exact route of questioning. The interviews were conducted in Portuguese and audio taped. Each interview lasted about 45-60 minutes, and the respondents checked transcriptions for accuracy.

7.3 FOCUS GROUP DISCUSSIONS (III)

Focus group discussions are ideal for exploring people's opinions, experiences, concerns and wishes related to specific issues. The method is based on interaction between the participants and may provide rich and varied information of the phenomena being studied (Barbour & Kitzinger, 1999). Based on positive experiences of group meetings with Angolan women in other contexts, we regarded FGDs as an appropriate method to explore women's views on choice of birth location. We also felt that the diversity of origin among women being attended to at the PDUs would enrich our data. Last, but not least, political instability had created insecurity and suspicious attitudes among residents of suburban Luanda. It was therefore considered psychologically more appropriate to meet respondents in groups than approaching them individually.

The use of FGD in health research, however, has also been criticized. It is argued, for example that data acquired do not reveal the strength of participants' views and is a poor indicator of attitudinal consensus (Sim, 1998). Moreover, methodological incompatibility has been observed in the analysis of FGD data. Some studies, for example, apply phenomenology, which aims to explore the individual experience whereas FGD is analysed on group level (Webb & Kevern, 2001). When the intention of a study is to seek and interpret the meaning of phenomena, as in the case of the current study, a more systematic methodology, for example grounded theory, is a

feasible alternative (Emmelin, 1999). It is imperative, though, to include grounded theory when planning the study as data generation and analysis occur concurrently (Strauss & Corbin, 1998), a methodological approach that was complied within this study.

Selection of participants was performed “on location” (Krueger, 1994) as this was found to be the only possible option, given the described situation in Luanda and the fact that the PDUs did not keep maternal records. In order to include women who might differ in their maternal health seeking behaviour compared with those found at the PDUs, discussions were also conducted in small community markets and at a women’s meeting in a local church. Older women were included to enrich and broaden the discussion. Participants in the community groups were more or less familiar with each other, whereas participants at the PDUs were not acquainted.

Some argue that the ideal number of focus group participants is between 8 and 12, whereas researchers performing sociological studies prefer to work with groups of five or six, or even as few as three participants (Barbour & Kitzinger, 1999). The number of participants in our FGDs ranged from 4 – 6, so called mini-focus groups. This was partly due to unsuitable and noisy surroundings, but also to facilitate the understanding of Portuguese, which was tinged by local dialects. The discussions, which varied from 40-90 minutes, were audio taped and additional notes were taken. The moderator opened the discussions with the questions “can you tell us about your labour and delivery experiences and how do you decide where to give birth?” During the discussions, aspects such as midwives’ and physicians’ attitudes, cost of institutional delivery, cultural traditions, and the war situation, were spontaneously brought up by the participants and consequently probed into by the moderator.

7.4 OBSERVATIONAL STUDY (IV)

A pre – and post intervention study, applying the direct non-participant observation data collection method, was conducted at the HCM labour ward (Maputo, Mozambique) in order to analyse perinatal midwifery care routines and the use of the partograph. This methodology has previously been used by one of the investigators in both affluent and poor countries.

The observation instrument included a total of 69 variables related to quality of care in i) maternal ii) foetal and iii) neonatal observations. Four midwives were trained as research assistants to observe and register the performance of midwifery practices during the first and second stages of labour and the immediate postpartum period. Any perinatal death was registered and the Apgar score was assessed simultaneously with the midwife on duty. The research assistants also measured the body temperature of the newborn infant at three different occasions. The local research team met regularly with the research assistants to give feedback and to discuss potential problems arising during the research period. The research assistants as well as their supervisors remained the same during both data collection periods, whereas the observed midwives were partly substituted by others from one period to another.

The intervention comprised seminars, which all midwifery teams attended and where results from the pre-intervention observations were presented. In areas where care was found to be less than optimal, the reasons as well as the measures to be taken in order to improve performances were discussed. The first series of seminars focused

on hypothermia and on introduction of to skin-to skin care. A mother-infant dyad from the neonatal intensive care unit was invited to illustrate this methodology and for the mother to describe her experiences of caring for the newborn infant in this manner. Moreover, the importance of monitoring fetal heart rate to prevent asphyxia was emphasized. The second round of seminars included education in partograph documentation and interpretation of information collected. Preliminary results from the qualitative study on midwives' perceptions of factors influencing their ability to provide quality perinatal care (V) were presented and discussed with the midwives. The third round of seminars, which included repetition of previous lectures, took place only a few months prior to the post-interventional observations. The intention was to have six months between the observation periods. However, due to severe flooding, which occurred in Mozambique during 1999 and 2000, the post-intervention observation was delayed by 9 months.

7.5 IN-DEPTH INTERVIEWS (III, V)

The qualitative interview is a tool, which aims at discovering phenomena, characteristics or meanings rather than deciding the frequency of a pre-existing problem (P. G. Svensson & B. Starrin, 1996). In-depth or unstructured interviewing requires an interview guide to make sure all aspects regarding the research area is covered (Patton, 1987; P. G. Svensson & B. Starrin, 1996). An important aspect, which must be honoured in this method, is open questioning that allows the respondent to reflect freely and the researcher to "follow the lead" through probing.

Six additional in-depth interviews with four women and two men were conducted in study III in order to validate emerging concepts such as "informal user-fees" and "courageous women give birth at home" i.e. theoretical sampling (Strauss & Corbin, 1998). The interviews, which lasted from 30 – 60 minutes, were tape recorded and transcribed verbatim in Portuguese. The rationale behind including two men, which were fathers of four respectively eight children, was their perceived ability to affirm and provide variation to the FGD data.

In-depth interviews were also considered to provide the best opportunity to explore midwives' perceptions of factors that facilitated or obstructed their ability to provide quality perinatal care (V). By approaching the midwives individually, we also sought to reduce peer pressure, which might have influenced their willingness to divulge personal experiences.

The interviews with the 16 midwives were conducted by the author of this thesis in a secluded place at the HCM during morning and afternoon hours. The point of entry to the interview was "can you discuss with me what you feel assists or hinders you from providing good care to the unborn baby and the newborn infant?" From the pre-observational study (study IV), some areas of concern emerged, which further served as guidelines for the interviews, such as caring procedures, neonatal observations and documentation. The midwives spontaneously brought up a variety of issues, such as women's behaviour, inter-professional relationships and working conditions, which were probed into and pursued in the following interviews. As the study was analytically guided by the grounded theory approach, data collection pursued the idea of theoretical sampling described under study III (B Glaser, 1978; Strauss & Corbin, 1998).

All interviews were tape-recorded and lasted from 45 to 60 minutes. The tapes were transcribed verbatim in Portuguese and checked by the Mozambican co-investigators and the respondents for accuracy. Data collection was conducted from June to October 2000.

8 DATA ANALYSIS

8.1 STATISTICAL METHODS (I, IV)

Descriptive analysis was performed for study IV and I.

For the ten variables analysed in study I, an initial manual calculation of chi-square, which is used to calculate the differences between nominal variables i.e. variables with qualitative characteristics, in two or more groups were performed (Bland, 2000; Ejlertsson, 1992). At a later stage, the same material was transferred to SPSS in order to present degrees of freedom (Bland, 2000; Ejlertsson, 1992).

Data from the observation study and the partograph evaluation (study IV) was entered into the EPI-info statistical programme version 6 and proportion analysis between pre-and post-intervention groups was performed in stratified groups. Chi-square with p-value as well as percentage has been used to present the results (Bland, 2000). When the observed frequencies = 0, which is acceptable if the expected frequencies meet the criterion, Epi-info calculator applied Yates corrected p-value (Bland, 2000; Ejlertsson, 1992).

8.2 QUALITATIVE ANALYSIS (II, III, V)

A process built upon synthesis of qualitative methods (Hildingh, 1996; Taylor & Bodgan, 1984), which followed general guidelines for qualitative research, were used to analyse the semi-structured interviews in study II. The process included reading of data transcripts and defining main themes, sub-themes and illustrating statements.

Transcripts from the FGDs in study III and from the in-depth interviews in study V were analysed, using grounded theory, which aims to create theoretical concepts that can explain social phenomena discovered in data. The constant comparative analysis (B. Glaser & Strauss, 1967) was applied to data, i.e. comparing incidents and emerging concepts from the various FGDs to each other. Three distinct but interrelated and at times parallel coding procedures were also used, namely open, axial and selective coding (Strauss & Corbin, 1990, 1998).

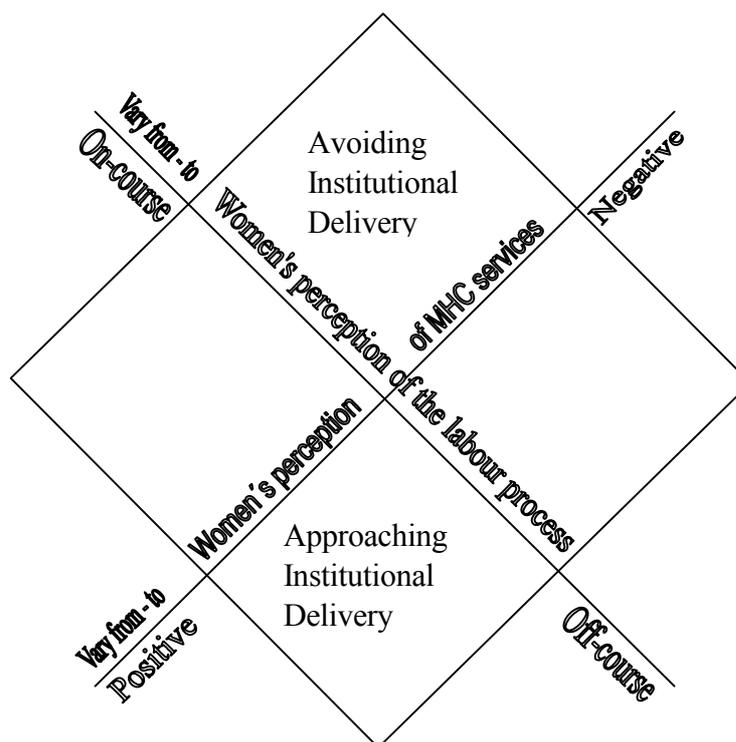
Open coding, involved examination of transcripts word-by-word and line-by-line, searching for ideas or phenomena using the participant's own expressions (substantive codes). These were labelled with more abstract concepts and developed according to their properties i.e. characteristics and dimensions i.e. the range. Similar concepts were pooled into categories (Table 3).

Table 3. Some open codes related to categories, properties and dimensions of categories, example from Study III

Open codes	Category	Properties	Dimension
“We are belittled”	Women’s perception of quality of care	Type of attitude	Negative to positive
“Pains can start any time”	Women’s perception of process of labour	Time of onset Type of onset	Day or night Vague - intensive
“The labour can be speedy”		Duration of labour	Short - long

The second stage, *axial coding*, is developed by Strauss and Corbin (1990, 1998) and involves sorting the information and putting the data together by looking for connections between categories and searching for patterns as shown in Figure 3

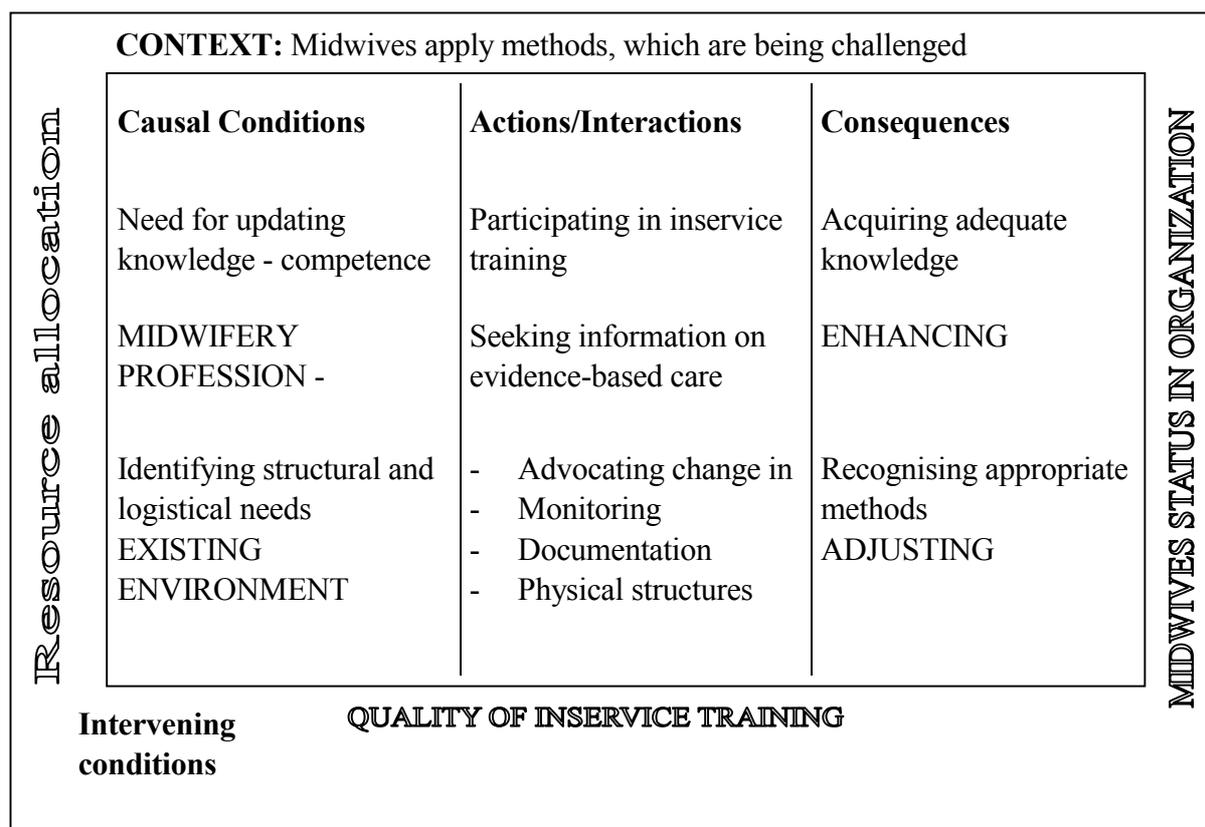
Figure 3. Mini framework showing crosscuts between two categories, an Example from study III



When, for example, the categories “women’s perception of quality of the labour process” is crosscut with the category “women’s perception of MHC services” a woman who consider her labour to be normal (on-course) and the MCH services to be of low quality may decide to avoid institutional delivery.

The paradigm model, another analytical instrument developed by Strauss and Corbin (1998) was used to develop and specify the relationships between various categories as illustrated in Figure 4 (study V). This model contains the following components: causal conditions, actions /interactions (taken in response to a phenomenon) and the consequences of the actions. The context, in which the phenomenon is taking place, is specified as well as the intervening conditions (resource allocation, quality of in service training, midwives status in organization), which may facilitate or obstruct the interactions.

Figure 4. Axial coding for the category “CARING TECHNOLOGY” in Study V



Selective coding, the third stage, is the process of integrating and refining categories through the identification of a core category, i.e. the main phenomenon discovered in data. According to Strauss and Corbin, it is essential that all major categories relate to the core category. Moreover, the label chosen to describe the core category must appear frequently within data. The core category must be able to explain both variations and the main point identified (Strauss & Corbin, 1998).

Two core categories (main themes) were identified in data from the FGDs. These are addressed in two separate papers, of which one is part of this thesis. The core category can belong to any group of theoretical code; a process, a condition, a dimension or a consequence (B Glaser, 1978). In paper III the core category was identified as a process.

Grounded theory technique advocates the use of writing memos and preparing diagrams such as the paradigm model (Figure 4) or models designed by the

investigator her/himself, and I found it very useful to apply some of the suggested models (III, V). However, I also found mind mapping (Wycoff, 1991) valuable, i.e. graphically displaying emerging and related issues on large sized papers, and used this method during all the qualitative studies (II, III, V).

9 TRUSTWORTHINESS AND VALIDITY

Lincoln and Guba apply the concepts *credibility*, *dependability*, *conformability* and *transferability* when evaluating the “soundness” of qualitative research (Lincoln & Guba, 1985).

Credibility addresses quality of the research process regarding methods of data collection and data analysis. One weakness of the FGD study (III) might be the fact that all participants were Portuguese-speaking, inferring that we may have missed important information from the non-Portuguese speaking communities. On the other hand, women attending antenatal care represent several provinces with different languages, a situation which logistically requires a common language. The information received is considered to be reliable due to the fact that the FGDS were conducted in seven of nine suburbs and that approximately 80 percent of women in Luanda attended antenatal care (CAOL 1996-2000).

Triangulation, i.e. using more than one method in the same study, is considered to be one way of ensuring credibility (Lincoln & Guba, 1985; Patton, 1989) and was done as part of study III, in which six in-depth interviews were conducted to validate emerging ideas from the FGDs. Credibility also depends on the researchers’ abilities to apply the methods chosen, and my experience is that this developed in the course of undertaking the research for this thesis. The understanding of grounded theory techniques, for example, has deepened along with the studies (III and V). Finally, credibility may also be assured by peer review (Lincoln & Guba, 1985), which has been performed by supervisors and colleagues at doctoral seminars and with colleagues in Luanda (III) and Maputo (V).

Dependability refers to how well others can follow the study’s development (Hamberg, 1998) or if the study process can be audited (Koch, 1994). Audiotapes and transcripts, which have been checked for language accuracy, are available for the qualitative studies (II, III, V). The grounded theory technique applied on study III and V is in its nature very systematic and believed to vouch for dependability (Strauss and Corbin, 1998). Moreover, notes, memos and mind-maps (Wycoff, 1991) developed for each step of the analysis have been organised and filed.

Conformability reflects the aspect of qualitative research, which ensures that the interpretation of data represents the reality of those being studied, i.e. findings should not be distorted either due to subjectivity or due to poor analysis. Analysis of the interviews with PDU midwives (II) was conducted in Sweden and discussed with the participants at a later stage. Even if there were no objections regarding interpretation, this procedure might be considered as a weakness. However, the fact that findings from Luanda (II) to a certain extent were confirmed by findings from the in-depth interviews with midwives in Maputo (V) tends to offer support to our interpretation.

Preliminary analysis and interpretation of FGD data (III) was conducted with co-investigators in Luanda and continued in Sweden with supervisors. Discussions of the final results were held with colleagues in Luanda prior to submission of the paper. Due to practical reasons such as home based maternal records, the FGD findings could not be discussed with the participants in order to get feedback on our interpretation, a fact that must be regarded as a weakness. However, we sought to strengthen the FGD findings by performing theoretical sampling, interviewing key informants, which were considered to possess knowledge of the phenomenon being studied (Creswell, 1998; Strauss & Corbin, 1998). How sure can we be that our findings represent the “truth” about women’s decision-making processes in childbirth? There is no guarantee, but the fact that data from the FGDs (III) did not differ in essence, only in variance, may serve as an indication of how close to the real concerns we believe we came.

Findings from the in-depth interviews with HCM midwives in Maputo (V) and our interpretation of these were discussed with the participants during the open coding and again after the selective coding.

Transferability addresses the issue of generalisation of results, which is not a valid aspect in qualitative research, as findings are not proofs of real life per se but an indicator of a group’s behaviour or condition within a certain context. It is therefore important to describe the participants distinctly in order for investigators in similar circumstances to apply findings or conduct research in similar contexts (Hamberg, Johansson, & Lindgren, 1994). Selected demographic indicators of participants are available for studies II-V. The models developed in studies III and V can be applied and/or tested in similar contexts where they might be found valid (Strauss & Corbin, 1998). Consequently there is no obvious reason not to believe that qualitative findings may not be valid elsewhere, i.e. it has ‘face generalisability’ (Maxwell, 1996).

Validity related to the quantitative part of this thesis (I, IV) may be discussed in terms of the instruments applied, i.e. content validity (Burns & Grove, 1993). The partograph (I, IV) is an established document, which despite contextual specificities are based on identical principals (WHO/MCH/88.3, 1988). The development of the data collection protocol was conducted in line with suggestions made by WHO regarding operational research on the partograph, i.e. evaluation of training (WHO/MCH/89.1, 1989). The observation protocol, applied in study IV was developed by experts in perinatal health and midwifery, ensuring that major elements relevant to the study were being measured. A similar protocol has also been used in other studies (Christensson et al., 1988; Maimbolwa, Ransjö-Arvidson, Ng'andu, Sikawze, & Diwan, 1997; Mngadi, Zawane, Ransjo-Arvidsson, Ahlberg, & Thembi, 2002). The protocol was pilot tested prior to the study in two phases with some adjustments made in-between.

Methodological triangulation was applied within study IV where both observations and examination of partographs were conducted. This enabled us to compare data related to the same delivery from two perspectives, the research assistant’s observations and the midwives actual performance. Furthermore, the partographs were examined by an external researcher, which may prove essential, as the inter-observer reliability was not checked.

10 ETHICAL CONSIDERATIONS

Individual information regarding the purpose of the study and the right to refrain from initial or further participation was given to all women and midwives in the studies, and those who accepted to participate, consented verbally. Permission to conduct studies I-III was obtained from the Provincial Health Delegation of Luanda, and for studies V-VI from the Department of Gynaecology and Obstetrics at HCM in Maputo. Ethical permission was also granted from the Ethical Committee of Karolinska Institutet.

Is it ethically justifiable for a foreign investigator to do research on existing midwifery practices and women's experiences in settings, which on most accounts are unfavourable for providing quality care? The answer to such a question is not crystal clear. In Luanda, supervision of midwifery practice at the PDUs revealed difficulties in partograph use, which were addressed through educational intervention. The evaluation of the partographs thus became the starting point of an operational research whose objective was to modify and improve training of midwives for these units.

In Maputo, there were indications that substandard midwifery care at HCM labour ward negatively influenced neonatal health. Even if the collaborative research describes this care per se, it also contributes knowledge, which may be instrumental in promoting change. The research may also be regarded as ethically justified by the fact that midwife colleagues from Luanda and Mozambique actively participated in the research process and developed capacity to conduct studies and disseminate findings.

There are two ethical concerns, which I would like to mention. The first relates to potential negative influences on national co-researchers and colleagues, which may emanate from the publication of findings. The second relates to the concern that women who shared their opinions might be subjected to repercussions from both health personnel and local MHC management. Confidentiality was promised to midwives as well as FGD participants. However, actions were taken by CAOL upon dissemination of the FGDs results, which might have provoked negative reactions against the women. Individual risks are often associated with publications and dissemination of research results, but I believe these should be weighed against potential gains.

11 FINDINGS AND DISCUSSION

The findings from the five studies are summarised and commented upon under three main headings; a) midwifery care from the providers perspective b) utilization of midwifery care during childbirth - the user's perspective and c) observed midwifery practice during childbirth

11.1 MIDWIFERY CARE FROM THE PROVIDER'S PERSPECTIVE (II, V)

The experiences of PDU midwives (II) were described under four main areas, *society/culture, significant others, personal and professional self* (Table 4).

Table 4. The PDU midwives perceptions and experiences as distributed under four
The four main areas

Main areas	Findings
<i>Society/culture</i>	Sensing the population’s embarrassment of poverty Sensing the population’s ambivalent attitudes towards them as midwives Perceiving that women adhered to childbirth traditions Experiencing the effects of unreliable infrastructure
<i>Significant others</i>	Perceiving the relationship to the woman in labour and her family Emphasising the support of other PDU colleagues Depending on the obstetric team in emergency Depending on the presence of the ambulance personnel Trusting in the good-will of community members
<i>Personal Self</i>	Trusting God Being the bread provider Expressing passion for the midwifery profession Demonstrating national loyalty
<i>Professional self</i>	Describing the art of midwifery Enjoying autonomous midwifery Appreciating and depending on the partograph Requesting adequate medical supplies Criticising management Defining needs for more knowledge and competence Admitting failure and sense of guilt

The opportunity to perform as *autonomous midwives* was highly valued, however, it required self-confidence and courage to sustain such a position as it often presented challenges for which the midwives indicated they did not feel sufficiently prepared. The midwives referred to their perceived need for improved competence as a continuous process, which ought to include in-service training and supervision as well as higher academic studies.

Along with delegation of responsibilities, tools to help promote quality care were provided such as the partograph, radio communication and transport, which were all declared indispensable. Furthermore, the midwives indicated that they relied upon the obstetric team at the referral hospital to solve emergency cases and that a positive outcome would build a trustful relationship with the community. Despite the presence of these tools, the midwives did not always transfer women in labour when indicated by the partograph (I), an issue that was pursued in study II.

The importance of a well-functioning referral chain during childbirth is well documented, but many low-income settings experience severe problems such as limited resources and inefficient organization, which reduce access to emergency obstetric care (Donnay, 2000; Liljestr nd, 2000). In the present study (II), the PDU midwives claimed that the ambulance was not always present when urgently needed as two units shared the same ambulance. However, the midwives also indicated that they at times omitted to transfer women who opposed the idea, in particular if they felt confident they could handle the case themselves. Campos et al questioned the PDU midwives’ ability to

interpret information collected and documented on the partograph (P. A. Campos et al., Unpublished), which might be yet another explanation for the missed transfers observed in study I. Strict guidelines intended to facilitate quality care during childbirth was developed for the PDUs in Luanda (P. Campos & Corado, 1991), but unless the midwives complied with the guidelines, the quality of care will suffer. Moreover, the PDU midwives' intention of gaining the population's confidence (II) might be compromised, in particular if the consequence is negative outcome of childbirth.

The socio-economic hardships existing in Angola and Mozambique (WFB, 2000) were referred to as constraints affecting both midwives and women. The impact of low salaries were emphasised by the PDU midwives (II) who also expressed that the incentives paid by CAOL (Brolin & Wessel, 1999) had gradually lost its significance due to successive reductions. The PDU midwives discussed the strain of not being able to provide sufficiently for their families (II), a fact which was acknowledged and sympathized with in the FGDs (K. Pettersson, Christensson, Gomes de Freitas, & Johansson, 2004)

The financial difficulties also influenced maternal health care seeking behaviour. In Maputo, for example, women were perceived to avoid antenatal care information, as they could not afford to comply with nutritional advice given. On the other hand, the "moderating fee" charged of women who approached HCM without a referral letter did not discourage women from choosing to give birth at HCM (V). These are contrasting pieces of information, which may either be indications of women's priorities during pregnancy and childbirth and/or cultural aspects. It is known from other contexts, for example, that women sometimes purposely reduce dietary intake to avoid the birth of a big child (Nag, 1994; Shreedeh, 1998). The willingness to pay for expert care provided at HCM may be related to dissatisfaction with midwifery care at the PDUs; however, the present study does not provide evidence to support this assumption.

Women in Luanda, on the other hand, were perceived to avoid the PDUs during childbirth because they felt embarrassed at not being able to bring their own alimentation and clothes for the newborn (II). These findings were confirmed by study III, where "shame of poverty" was identified as one aspect influencing women to avoid institutional care during delivery.

Performing in a midwifery team, which is part of the obstetric team at a main referral central hospital, presents similar but also quite different challenges than those described by autonomous midwives. The HCM midwives identified aspects related to the existing environment, their interaction with women in labour, their profession and the caring technology, which needed to be addressed in order for them to provide quality perinatal care (V).

A core category, 'changing perinatal care management', emerged as a result of the midwives' repeated demand for change, which was understood to be a process liable to disrupt at structural, individual, intrapersonal and interpersonal levels. The change process comprised four dimensions i) organizing ii) modifying iii) enhancing and iv) adjusting, which reflect the type of actions/interaction required to respond to the problems identified by the midwives (Table 4). In order to achieve change in perinatal care management and consequently change in quality of care, communication and collaboration, identified as change agents, needed to influence the four dimensions of change simultaneously.

Table 5. Aspects of dimensions related to ‘changing perinatal care management’ (V)

Dimension of change	Aspects
‘Organising’	Integrating peripheral and central management of pregnant women and women in labour Facilitating teamwork Providing enabling working conditions Integrating management and professional efforts
‘Modifying’	Reflecting on expectations on women in labour Reviewing perceptions of women in labour
‘Enhancing’	Requesting professional support and guidance Strengthening midwifery practices Updating midwifery knowledge and competence Requesting professional recognition
‘Adjusting’	Implementing evidence based midwifery practices Delegating monitoring and documentation Becoming aware of own attitudes towards change

The process of change was also perceived to depend on mediating/intervening conditions originating in the national context. The size and the distribution of the national health expenditure, for example, would influence to what extent change could be achieved. Accessibility and quality of services offered depended on the structure and organization of national maternal health care services, such as delay in distribution of newly trained midwives and replacement of vacancies.

Expressing a need for change may easily be done in an in-depth interview whereas advocacy for change may prove extremely difficult in the practical life for midwives, who according to Lugina (2001) often have a low status in the medical hierarchy in low-income countries. She further argues that the maternal health care system needs to recognise the need for change and provide opportunities for midwives to partake in decision making processes (Lugina, 2001).

Our findings indicate that the HCM midwives (V) did not feel free to approach superiors with ideas of their own. Experiences of public scolding and repercussions when offering suggestions to obstetricians, for example, resulted in a tendency to withdraw from inter-professional collaboration and communication, a behaviour that would be counterproductive to the change process proposed by the midwives (V). Even if the midwives’ withdrawal from collaboration might be understandable in view of the findings presented, a positive attitude could be instrumental in promoting midwives as the “linchpin” in the obstetric team (Kwast, 1991). The above reflections stand unopposed, though, as either management or the medical profession was included in the present study, which might be regarded as a weakness but also as a challenge for future research.

Attitude to change is regarded by Armenakis as change specific. It is more likely to be accepted if the expected effect is perceived to be positive for an individual, whereas a change that threatens an individual’s interest, may prompt resistance (Armenakis, 1999). Our findings indicate that the midwives reacted positively to the management’s

idea of transferring the responsibility for partograph documentation to them. However, certain inflexibility was noted regarding changes, which required some efforts on the part of the midwives, such as allowing women to squat during childbirth. Instead of exercising introspection and self-criticism, which is essential in any process of change (Benner, 1984), the HCM midwives blamed their resistance on the management's negative attitude.

The model of change presented in study V suggests that success depends on the extent to which various factors within and outside the change process are addressed simultaneously. Our findings are consistent with those presented by Balfour and Clarke who argue that reality is even more complex than theory and as such presents a serious obstacle, which must be overcome in any change process. They further emphasised, as did also the HCM midwives, the importance of involving all members of a multidisciplinary team, including the management (Balfour & Clarke, 2001).

When applying grounded theory technique, theoretical models or theories emerge, which describe the individual's and/or a group's perspective of a specific situation and the strategies devised to resolve or cope with that situation, a so-called substantive model or theory, which can be applied to similar contexts (Creswell, 1998; Delleve & Abrahamsson, 2002; Strauss & Corbin, 1990). When summarising the findings from the care provider's perspective, it therefore seems appropriate to explore whether the model of change proposed by the HCM midwives (V) is applicable to the context described by the PDU midwives in study II (Table 4).

Aspects related to the change dimension 'organising' (Table 5), such as disrapture of infrastructure and inefficiency of the maternal health care management, were also described by the PDU midwives (Table 4). 'Modifying' (Table 5), which highlighted the need for revised attitudes when interacting with women in labour appears at first sight to be invalid to the findings study II. According to the PDU midwives, they worked hard on establishing a good relationship with the women (*Significant Others*, Table 4). However, the expression "rotten apples in the barrels", which was used to by several midwives, indicates awareness of negative attitudes among midwives towards women in labour.

The PDU midwives focused on the satisfaction but also the demands and pressure of being autonomous, a position perceived to be closely connected with delegation of tasks that exceeded their competence. Their advocacy for more education coincides with the HCM midwives' expressed need for further training. This and other aspects described under the main area *professional self* (Table 4) seem to correspond to the dimension 'enhancing', which addressed concerns related to the role and competency of midwifery profession. Professionals that have been delegated responsibilities, for which they are not trained, are in need of training corresponding to the additional tasks (Kwast & Bentley, 1991). Tanzanian midwives identified gaps between theory and practice, which hampered their ability to provide good postpartum care. Lugina et al (2002) therefore advocate midwifery training that can readily be translated to practice (Lugina, Johansson, Lindmark, & Christensson, 2002). Moreover, there seems to be consensus that continuous updating of midwifery, as well as medical knowledge, will have a positive impact on the performance of health personnel (Faxelid, 1997; Lugina et al., 2002).

'Adjusting' (Table 5), the dimension related to changing caring technology, also appears to be invalid to study II. Statements such as "they may squat if they want to,"

reflects certain flexibility in the PDU midwives attitude to women in childbirth. *Communication* and *collaboration*, which were identified as agents in the process of change (V), were built-in technical strategies of the PDU referral system in Luanda (II). However, midwives also identified individuals and groups within the community with whom they needed to interact in order to function as autonomous midwives (*Significant Others*, Table 4).

It seems appropriate to conclude that regardless of differences related to study design and focus of care, maternal vs. perinatal care, the proposed process of change (V) may also be applied to the PDU setting.

Quality care during childbirth is crucial to improving maternal and neonatal health, and midwives in both the PDU and the HCM setting identified similar key components, which obstructed them from providing optimal care. Many of these were related to external factors, which might be difficult to address in resource-low (Kowalewski & Jahn, 2001). However, cost-effective, appropriate and efficient interventions, which vouch for quality, are available and can be implemented without major problems. One example is the ventilation of asphyxiated newborns with room air if oxygen is not available (Saugstad, 2001). The inter relational difficulties described may well reflect the midwives perceived reality, but according to Lugina et al (2002) it is essential that midwives reflect upon their own behaviour as this is the point of departure for change.

In my view, one of the major constraints for midwives providing care during childbirth is the exposure to HIV infection. However, this did not surface naturally in the interviews with the midwives. Recent but unpublished data from Mozambique indicate that midwives, despite being infected, continue to neglect guidelines for protective measures such as applying goggles and gumboots (Dgedge, 2003). Informal discussions also revealed that midwives tend to avoid testing themselves for HIV. In view of the fact that until very recently there was no treatment available for MHC personnel, at least in Mozambique, the fatalistic attitude presented, might be regarded as a way of coping with inevitable facts of reality.

11.2 UTILIZATION OF MIDWIFERY CARE DURING CHILDBIRTH - THE USER'S PERSPECTIVE (III)

The process, which I have described as “moulding” of health care seeking behaviour during childbirth (III) was identified when seeking to understand how women discerned events influencing their decision regarding place of birth. To my knowledge, this concept has not been identified elsewhere in the research literature. The perception of quality of care, the process of labour, the informal user-fees and the sense of being empowered were recognised as factors, which obliged women to adapt their care seeking behaviour. Political unrest, migration, socio-economic difficulties and the existing infrastructure were identified as intervening conditions influencing the “moulding” process. Moulding, which is the concept used to describe adaptation of the foetal head when passing through the birth canal (Bennett & Brown, 1989), was found to be the concept which best explained the process faced by women as they attempted to shape their actions during childbirth to evolving circumstances. The “moulding” process described in the present study, resulted in two main strategies, ‘avoiding’ and ‘approaching’. When cross-cutting categories (Strauss & Corbin, 1998), four main

patterns of care seeking behaviour emerged, which are presented together with their specific characteristics in table 5.

Table 6. Salient features of the patterns of women’s care seeking behaviour during childbirth (III)

Pattern 1-4	Characteristics
The labour process ‘on-course’ avoiding pattern	Personal courage – a motivation for home delivery Discouraging hearsay and encounters with midwifery care Deprivation of active participation in the labour process Informal user-fees – a waste of money Fear of the unknown Shame of poverty
The labour process ‘off-course’ avoiding pattern	Sense of powerlessness Reluctant care of complicated cases Informal user-fess amplifying risk-taking Women’s own decision to avoid institutional care
The labour process ‘on-course’ approaching pattern	Advocacy for modern childbirth - discarding traditional childbirth practices Ambivalence towards choice of institution for delivery Willingness to pay for care Homebirth a back-up strategy
The labour process ‘off-course’ approaching pattern	Feeling empowered Awareness of complications – motivation for institutional delivery Ability and willingness to pay – Emancipated women must speak up

Evidence indicates that these patterns are mutually exclusive and as such explain different ways of “moulding” care seeking behaviour during childbirth. It cannot, however, be predicted to what extent women will adhere to one or another pattern. In the following section, the salient features of each pattern will briefly be discussed.

In pattern one, *personal courage* emerged as the essential attribute, which enabled women to manage childbirth on their own. This coincides with the PDU midwives perception (II) that “courageous women” did not seek institutional care and therefore were much admired in the community. The women conveyed that ‘being courageous’ was culturally correct and consequently expected of them. However, courage also appeared to be a necessity when facing the inability and/or unwillingness to pay for perceived low quality of care. Women’s courage moreover seemed to be amplified by religious faith as illustrated in the following citation: “*I ask God to help me, he will give me strength to go through with it on my own*”.

Giving birth was historically considered to be a perilous adventure in Sweden due to crude lay assistance and medical technology (Andersson, 2000; Romlid, 1998). Each pregnancy provoked anxiety and fear and it was common that women asked Virgin Maria to help them as she was perceived to hold the “keys” that would open the birth channel (Högberg, 1983). I assume that previous generations of Swedish women possessed courage, which is comparable to the courage described by the women from

Luanda. Birth is still and will always be a painful and unpredictable process. Moreover, women in resource poor settings continue to face this process with little or no assistance (Kunst & Houwelling, 2001) and as findings from the FGDs indicate (III), women are also subjected to financial demands from the midwives. Displaying courage may therefore be the only viable option for many poor and vulnerable women.

Being deprived of participation in decision-making during childbirth either by the health system or by the family, *sense of powerlessness* (pattern two) was perceived to pose a potential threat to the outcome of childbirth. Statements such as “ *we see soft-drinks-payments-related maternal deaths*” and “ *her mother in law decided it was better to deliver at home ...when she was exhausted, they finally brought her to the hospital...but the baby was already dead*” illustrate the consequences as perceived and related by the women.

The concept of empowerment, which was introduced in the 1970's related to the situation of the powerlessness of certain groups within society (Lindgren, 2002). Nowadays, the concept is widely used in health care contexts and may be defined as “ the process of enabling or imparting power transfer from one individual or group to another” p. 306 (Rodwell, 1996). Empowering moreover aims at increasing the individual's control over decisions and actions regarding her/himself (Nutbeam, 1998). Albeit the mental ability to make adequate decisions might be limited for a woman whose labour becomes complicated, it is essential that the midwives demonstrate a participatory approach if and when the family decides to seek care.

A positive attitude may work as a strategy, which encourages the family to act differently in the future. Due to the design of the present study, it cannot be concluded that extra-institutional maternal mortality actually exists in Luanda. The professed avoidance in cases of complications indicates, though, that such may be the case. A study from Papua New Guinea reported that women in a population with proportionally many obstetric complications did not seek institutional care during delivery, in fact only five of fourteen identified maternal deaths had a hospital record (Garner, Lai, & Baea, 1994). Moreover, findings from Mozambique verify that maternal deaths occur in the community but are not reported as such (Songane & Bergstöm, 2002)

Advocacy for modern childbirth, including non-adherence to certain traditional practices, was found to be the prominent feature in pattern three. In contrast to the PDU midwives who perceived they offered culture sensitive care by handing over the placenta for home burial (II), the women did not appreciate this procedure. It seems that midwives in Luanda continuously need to update their understanding of women to whom they cater. Displaced women may modify former childbirth habits quickly, either due to influences from modern city life or due to logistical limitations, which appeared to be the reason why women did not want to take care of their own placenta. According to an Angolan anthropologist, traits and cultural patterns were in a state of corrosion due to the manner in which the population were forced to re-establish themselves (Vunge, 2001). This apparently also applies to childbirth traditions, which may fade from memory and experience if elderly women do not migrate with the younger generation, which appears to be quite common in Angola (K. Pehrsson, 2000).

The discourse noted between women and midwives regarding caring procedures implies that the dimension “adjusting” within the change process (V) is applicable also to the PDU context. Women did not, for example, appreciate that the midwives handed over the placenta for home burial. Through reflection, the midwives may find it

pertinent to revise some caring procedures and practices to better meet women's expressed needs and desires and consequently provide true culture sensitive care (Leininger, 1991).

The sense of *feeling empowered* was found to strongly influence the care seeking behaviour in pattern four. Empowerment is also described as a process where individuals mobilise essential resources in order to feel or take control over their own lives (Gibson, 1991). In order to mobilise any kind of resources, however, they must be available and accessible. Comprehensive knowledge of childbirth complications and possible consequences thereof, combined with the ability and willingness to pay for institutional care, enabled women to seek institutional care during an 'off-course' labour process. Moreover, strength appeared to be gained from the experience of being emancipated, a characteristic, which encouraged women to vent their true feelings. Given the above-mentioned conditions, I assume that only a minority of women in Luanda could opt for this strategy. Caution is needed, though, as there is no statistical evidence on which to base such an assumption.

A major constraint for institutional childbirth was found to be the demand for informal user-fees. This phenomenon has been further developed in a separate paper (Pettersson et al., unpublished results). Our findings infer, though, that women experienced limited access to the maternal health care services, as they could not afford to comply with the unauthorised fee demands. These findings, in turn, suggest that maternal health care in Luanda is not available on equal terms for all women, a fact which according to Bogg et al may explain the low utilization of health services during childbirth (Bogg, Wang, & Diwan, 2002). An attempt was made to explore this with the PDU midwives, which did not succeed. It is therefore essential that this issue be pursued with a study design, which avoids researcher influence and ensures the respondents anonymity.

'Cephalic moulding' may be an easy or a difficult process, depending on the proportion between the foetal head and the pelvis (bony as well as soft parts) (Bennett & Brown, 1989). Based on the interpretation of data from the FGDs, "moulding" (see my alternative definition, p.53) was understood to be a stressful process, which required substantial adaptation by the women, regardless of what pattern of care seeking behaviour they i) chose or ii) were forced to choose. Moreover, it can be assumed that the aftermath of the longstanding civil war with consequent political and economic instability will most likely continue to create inequalities and inequity in maternal health care, which in turn requires that women will be compelled to "mould" or adapt their care seeking behaviour.

Adaptation is defined as the process of changing, for instance, behaviour to suit a new situation (Oxford, 2000) which implies adjusting, modifying or restructuring (The concise Oxford dictionary, 2001). Adaptation was initially a concept applied by researchers who examined the link between stress and ill-health on a physiological level (Rydén & Stenström, 1994), whereof Lazarus and Folkman's 'transactional model of stress and coping' is widely recognised and used. This model defines coping as efforts to manage demands. Demands and challenges are appraised by their characteristics and by the individual's possibility to respond, i.e. her/his coping resources. Adaptation is the outcome of coping and may either be classified as success or failure (adaptive or maladaptive) (Lazarus & Folkman, 1984). "Avoidant" strategies is regarded as more adaptive in the short run whereas attentive-confrontational

strategies lead to better adaptation in the long run (Suls & Fletcher, 1985). In view of our findings, however, one might argue that avoiding institutional care in a context where women perceive they may die if they cannot meet the demand for informal user-fees, is not only a positive, but also a wise manner in which to behave.

11.3 OBSERVED MIDWIFERY PRACTICES (I, IV)

The findings presented below reflect the differences between the pre-and post intervention observations of midwives and between the pre-and post intervention examinations of partographs.

11.3.1 Quality of perinatal care (IV)

Measurements to detect and prevent heat loss in the newborn were found to be of sub-optimal quality and did not improve in the post-intervention observation. Drying, which is considered to be the most important prevention initially to prevent heat loss in newborns (Christensson, 1994; Coudhary, Bajaj, & Gupta, 2000) was only undertaken in 56.9 and 50.2 percent of all cases respectively. Hypothermia showed to be a common problem, 49.6 and 53.0 percent ($p < 0.01$) of the newborn infants, respectively, had a temperature equal to or below 36° . Moreover, the midwives rarely measured or assessed the newborns' temperature, even if it improved somewhat in the post-interventional sample (2.5 vs. 8.1%, $p < 0.001$).

These findings do not support the HCM midwives' perception that hypothermia was a rare event, but show that midwives seem to perform according to their beliefs (V). Other research reports indicate that underestimation of hypothermia in newborns is not unique for Maputo (Coudhary et al., 2000; Dragovich et al., 1997). Health personnel may be under the impression that a hot climate is protective of temperature loss whereas in fact the opposite is true for the neonate. A significant proportion of newborns are likely to suffer from hypothermia, in particular during cooler periods in countries with tropical climates (Cheah & Boo, 2000; Kumar & Aggarwal, 1998)

Implementation of the skin-to skin method has been found to be effective in reducing neonatal hypothermia (Christensson, Bhat, Amadi, & et.al., 1998; Christensson, Bhat, & Eriksson, 1995). In view of our findings (V), it seems essential to apply immediate skin-to-skin care in order to reduce neonatal hypothermia at HCM. The midwives, however, seemed reluctant to do so, allegedly due to women's resistance and to the perceived danger of narrow delivery tables. The fact that skin-to-skin care has successfully been used at the HCM neonatal intensive care unit (Lincetto, Nazir, & Cattaneo, 2000) may, however, encourage the midwives to adjust their attitude to the procedure and provide practical support during the implementation phase.

Steps taken to detect and prevent intrapartum asphyxia were also found to be mediocre in the present study. Monitoring of the foetal heart rate (FHR) during the second stage of labour, for example, provides midwives with the initial sign of potential or imminent asphyxia. The FHR, however, was rarely checked and recorded at the beginning of the 2nd stage of labour, 50.6 vs. 54.8 percent ($p = 0.13$) and monitoring during the second stage of labour was even less frequent and even deteriorated significantly in the post-intervention observation, 24.9 versus 12.6 percent ($p < 0.001$),

respectively. Moreover, deliveries where maternal risk factors for neonatal outcome had been identified (46 vs. 42.3%, $p = 0.18$) were not monitored more regularly than labours identified as low-risk deliveries.

According to the midwives, understaffing and simultaneous deliveries were contributing factors to inadequate monitoring, which they recognised as a failure. However, the midwives still did not regard asphyxia as a common problem (V), a fact that was supported by study IV. Despite the inadequate FHR monitoring, the number of severe and moderate asphyxia cases as measured by Apgar score was surprisingly low, 1 vs. 0.6 percent and 10.6 vs. 9.8 percent, respectively. A previous study of vacuum extraction deliveries in Maputo showed that 83% of all newborns suffered from asphyxia (Bergström & Bugalho, 1992). Caution is therefore needed when interpreting the current findings, which most likely are influenced by the fact that only expected normal, non-instrumental deliveries were included in the study. Inadequate midwifery monitoring during childbirth is not unique for Maputo, similar findings are reported also from Zambia (Maimbolwa et al., 1997). Nevertheless, it is unacceptable, and may contribute to perinatal death or lifelong maiming due to undetected cases of asphyxia. Being confronted with mentally retarded children at the hospital premises served as a reminder of such failures, and created a sense of guilt according to the HCM midwives (V).

11.3.2 Partograph documentation (I, IV)

When examining the partograph use at the PDUs in Luanda (I), significant improvements of partograph documentation were found in seven of ten variables between the pre-and post-intervention groups and more partographs were correctly documented in sample II than in sample I. However, documentation of “descent of the presenting foetal part”, one of the variables relating directly to the main objective of the partograph, monitoring the progress of labour (WHO/MCH/88.3, 1988), did not improve. Nor did the midwives appear to act sufficiently upon information gathered during monitoring. The number of ‘missed transfers’ (variable 10) from the PDU to the referral hospital was similar (82.6% vs. 81.6%), which was considered serious, as the objective of implementing PDUs and training midwives to use the partograph as a monitoring device, was to secure timely referral in order to promote maternal and neonatal health.

Campos et al (unpublished results) reported that 139 cases (88.5%) of 157 transfers in Luanda were diagnosed by the PDU midwives as “others” such as haemorrhages, hypertension and intrapartum asphyxia, and 15 cases (9.6%) as previous caesarean sections. In contrast, the emergency obstetric unit diagnosed 45 cases (28.7%) as prolonged labour and 37 cases (23.6%) as other pathologies. These results indicate, as did ours (I), that further training; in particular analytical appraisal of information collected and documented is required in order for midwives to use the partograph as intended. Moreover, feedback regarding cases transferred could also be effective in enhancing the midwives understanding of documenting the partograph and acting upon information gathered.

The HCM midwives in Maputo were responsible for documentation of the admission and the delivery part of the partograph, whereas the obstetricians were responsible for the graphic part (IV). Admission variables such as blood pressure,

uterine height, presenting foetal part and foetal heart rate were regularly monitored whereas blood status and uterine tonus were neglected.

Some variables reflecting care provision at delivery were well documented before and after the intervention such as the newborn's weight (97 vs. 98.7 %) and the Apgar score (96.8 vs. 98.7%). In the majority of cases, however, the midwives neglected to assess Apgar by its five parameters, heart frequency, respiratory frequency, colour, tonus and reactivity. Initial treatment, such as nasal or nasal-pharyngeal aspiration, ventilation or medicines of newborns was recorded in 83 (11.8%) vs. 92 (14.9%) cases.

The graph, which records progress of labour, was infrequently utilised before and after the intervention (29.9 vs. 26.5%, $p = 0.16$) and a reduction in its use was even noticed in cases where maternal risk indicators for neonatal outcome were identified (30.3 vs. 27.5%, $p = 0.47$). Commencement of the graph was also examined in relation to length of stay in the labour ward, and significantly more graphs were initiated in the group of women who stayed longer than 3 hours both before and after the intervention (6.7 vs. 23 %, $p < 0.01$ and 9.7 vs. 16.9%, $p < 0.05$). However, the same reduction, which was noticed in the overall analysis, was also found in the "long stay group" in the post-intervention sample.

The overall documentation of the graphs, when initiated, was found to be inadequate. Although all variables were recorded once commenced, 64.8 and 79.6 percent respectively ($p < 0.05$) of the graphs were only plotted once during labour. Thus, the progress of labour, which is based on regular monitoring and recording of the variables that comprise descent of presenting part, cervical dilatation and moulding, could not be assessed.

The partograph is regarded as a valuable tool, which may prevent prolonged labours and promote timely decisions during labour (Lennox & Kwast, 1995; WHO/MCH/88.3, 1988) and is recommended for use both for peripheral and central labour units. Successful use of the partograph in PDUs is reported from India (Kirubakaran & Deepal, 1997). However, a survey from labour units in Zambia, reports that the partograph was rarely used and was also frequently missing in women's childbirth records (Maimbolwa et al., 1997). A study among obstetricians and midwives in Nigeria revealed that very few used the partograph despite recognising its usefulness (Umezulike, Onah, & Okaro, 1999). If use of the partograph is not properly introduced and supervised, the risk is that midwives as well as other health workers might perceive the record as an administrative constraint (Vangeenderhuysen, Renaudin, & Vall, 2001). This seemed to be the case even at HCM. Despite arduous attempts to implement adequate use of the graphic part, it was sadly neglected. Only two to three different calligraphies appeared on the few well-documented records. According to the midwives, not all physicians were in favour of their use of the graphic part of the partograph. Despite the perceived resistance, the midwives advocated that the responsibility for the entire partograph ought to be transferred to them (V).

The regular use of the graphic part of the partograph may not be the cheap alternative it is considered to be (WHO/MCH/88.3, 1988) when the cost of gloves for repeated vaginal examinations are compared to the few cases of prolonged labours (II, V), In both Luanda and Maputo, vaginal examination take place every second hour in the active phase of labour (clinical guidelines). I am aware that the small sample (II) and the sub-standard use of the partograph (IV) do not give sufficient ground to assert this opinion. However, the fact that many women were admitted in the expulsion

period, 46.1 percent before and 43.6 percent after the intervention (IV) may indicate a need for re-evaluating the routine use of the graphic part of the partograph. It might, for example, suffice to initiate the graph for all primiparas and omit the routine commencement of the graph for multiparas with > 8 cm of dilatation and previous normal births. The unpublished findings from Luanda (PA Campos et al., 1996) reported that only 38.9% of all cases reflected the main objective of the partograph, i.e. prevention of prolonged labour, may also serve as a support for limiting the use of the graphic part to certain groups of women. Recent information from Maputo, such as repeated utilisation of the same pair of gloves and increase of HIV/AIDS cases, further suggests that vaginal examination should be reduced to a minimum. However, it is essential to balance cost, quality of documentation and risk of transmitted infections with the possibility that apparent low-risk deliveries may become complicated and require monitoring for a longer period than initially perceived.

12 GENERAL DISCUSSION

12.1 METHODOLOGICAL ASPECTS

The use of methodologies, which traditionally belong to distinctly different paradigms, have been an interesting voyage where findings from the two perspectives at times supported and at times opposed each other. It is therefore my firm conviction that knowledge extracted by various approaches provides a comprehensive and explanatory picture of phenomena being studied. Other researchers, who have combined epistemological views, also testify to its value. “Emphatic” in-depth dialogue with women being admitted for incomplete abortion in Dar es Salaam, for example, revealed that illegally induced abortions were much higher than indicated by the results of a hospital-based questionnaire study (Rasch, Muhammad, Urassa, & Bergstöm, 2000).

It has hardly escaped anyone using grounded theory that there are divergent opinions regarding which school of thought should be considered the right one. According to Glaser, Strauss’s development of grounded theory cannot be considered true to the original method as the inclusion of a third coding procedure, axial coding, forces data into preconceived categories (B. G. Glaser, 1992). Strauss and Corbin, on the other hand, “demystified” the classical version of grounded theory by including the respondents’ view of reality. They argue that if the coding paradigms suggested do not fit the actual data, other coding families should be applied (Dellve & Abrahamsson, 2002). I found the various analytical models presented by Strauss and Corbin (1990, 1998) both useful and attractive as they offer structure as well as freedom to engage in creativity, which were helpful when developing the models (III, V). Whereas Glaser emphasises the need to develop theory, Strauss and Corbin (1990) are open to the idea of using grounded theory techniques for modified purposes. I chose to create theoretical models explaining my findings rather than claim theory development. The choice of referring to grounded theory in lower case was consequently a way of confirming my use of the method.

The fact that midwifery practices improved technically whereas the midwives’ reflective abilities were questioned (I) and the fact that there were no improvements in

the midwifery practices in perinatal care (IV) turned our attention to the quality of the interventions. As far as it can be judged, the interventions bear similarities with in-service education used in comparable settings. However, in Maputo, the continuity of the study was affected by the severe flooding, which occurred in 1999 and 2000. Another factor, which might have influenced the result of the intervention negatively, is the time period chosen to conduct the seminars. In order to facilitate the midwifery teams, which completed their nightshift, the seminars were held in the morning hours. However, this combination might be questioned, as the midwives were probably too tired to fully benefit from the lectures and partake in the discussions.

Faxelid who also studied in-service training of health personnel in Zambia, concludes that conventional training has its limitation and advocates the need to enable health professionals to identify, reflect upon and take responsibility for changes, i.e. 'participatory approach' (Faxelid, 1997). It is difficult to define categorically what constitutes a successful intervention, but the presence of dedicated individuals or teams as demonstrated in the case of the Kigoma experience (Mbaruku & Bergström, 1995) appears essential, at least to achieve short term effects. The creation of sustainable improvement relies on a complex web of factors (Balfour & Clarke, 2001), of which the HCM midwives identified various examples (V).

Language problems are often referred to as major barriers when conducting health care research in other countries, in particular when the official language is quite distant from the researchers' context (A. Johansson, 1998; E. Johansson, 2000). Portuguese, however, was commonly used in both study settings, a fact that facilitated the research process. When deciding upon a procedure for data collection, there is inevitably a fair amount of balancing involved. One can argue that valuable knowledge was lost, as local dialects were not used in the focus group discussions. On the other hand, such an approach might have limited our possibility of conducting the discussions at all. The FGD participants originated from various parts of Angola and spoke a variety of dialects. Furthermore, the Angolan co-investigators spoke Kimbundu, which would have excluded Umbundu speaking participants.

I also needed to consider whether my participation, being a foreign investigator, could have influenced the findings of the FDGs (III). It was decided that the Angolan part of the research team should guide one FGD on their own and interestingly enough, this discussion rendered less information than any of the others. This might be a coincidence; however, it is possible that the presence of a stranger, once confidence was established, encouraged women to speak more frankly. I also needed to reflect on the possible impact on the interview situation and the findings I, as a former colleague of the PDU midwives might have had. This is of course not an easy question to answer, as no one else, to my knowledge, has conducted similar interviews with the midwives in Luanda. Comparison is thus not an option. However, when contrasting the interviews with the PDU midwives (II) with the interviews conducted with the HCM midwives with whom I was not acquainted (V), I cannot point to any specific differences. Using myself as an instrument, I inevitably bring my experience and knowledge into the situation (Kvale, 1997; Strauss & Corbin, 1998). From one point of view, this may cloud objectivity and obstruct creativity. On the other hand, it might enhance theoretical sensitivity (Strauss & Corbin, 1998) and facilitate adequate probing. Either way, the crucial point is awareness of one's own "positionality", which makes potential

subjectivity more transparent and comparable to knowledge elsewhere (A. Johansson, 1998).

12.2 VULNERABLE WOMEN AND SAFE MOTHERHOOD

Utilization of health care services is according to Fiedler influenced by both macro- and micro level factors. He defines the macro-level factors as policies regarding financing of health services, manpower, organization and education and training for the health sector. The micro-level factors includes characteristics of the health care services such as organization, resource allocation and its use, performances of health personnel and patient satisfaction with quality of care (Fiedler, 1981).

The pictures drawn by various studies indicate that the low utilization of MHC services, in particular during childbirth, has several dimensions. However, financial barriers are often regarded as the major cause (Killingsworth et al., 1999; McPake et al., 1999; Nahar & Costello, 1998). As the theoretical model, “moulding of childbirth practices” (III) emerged; it became evident that women faced difficulties during childbirth, which were highly unfair. Even if the women stressed that not all midwives “should be tarred with the same brush”, financial as well as personal discrimination appeared to be a painful and quite common experience (K. O. Pettersson, Christensson, Gomes de Freitas, & Johansson, unpublished results). In these studies, we have no scientific data on the existence of informal user-fees in Maputo and in spite of informal evidence it is wise to apply caution in order not to draw parallels with the situation discovered in Luanda. It has been suggested that FGDs similar to those in Luanda (III), should be conducted in Maputo to explore women’s perception of quality of care during childbirth.

Angola and Mozambique do not appear to have embraced the idea of introducing user-fees in public health care (K Pehrsson, 2000). However, it seems apparent that the socio-economic turbulence of the war and the post-war situation in both countries has been instrumental in impeding the goal of providing the MHC services needed. Moreover, privatisation of maternal health care services appears to have created quality care for a selected minority in Luanda, and according to informal information, even in Maputo. In this context, the system of informal user-fees was perceived to bar women from accessing the so-called “free care” (III). Health care utilization is commonly used as a proxy indicator for equity in access to care (Bogg, 2002). Despite the fact that maternal care services are officially free of charge in many low-income countries, unfair treatment and inequity in access to services appear to be a common problem (D. R. Gwatkin, 2000; Kunst & Houwelling, 2001).

12.3 NATIONAL COMMITMENT TO QUALITY OF MATERNAL HEALTH CARE SERVICES

The governments of Angola and Mozambique aim at decentralising MHC services, in particular within the capital provinces (Figure 2). In Luanda, statistics indicate that as the deliveries increase in the PDUs there is not a corresponding decrease of normal deliveries in the referral hospitals, which was a major objective when implementing this system (CAOL, 2001). In Mozambique where the implementation of PDUs first

took place, an increase in normal deliveries at the referral hospitals was noticed. The moderating fee (V), which was introduced to prevent women from bypassing the PDUs, did not have the desired effect, at least not at the time when these studies were conducted. According to the HCM midwives, this situation might change if midwifery competence at the PDUs was improved (V). Recent information indicates that the number of deliveries at HCM has drastically reduced as a result of the opening of another emergency obstetric unit, the José Macamo Hospital (HJM).

It is unclear to what extent decentralisation has supported MHC services. However, there is evidence that emphasis on services close to the population and a functioning referral system combine to form an important tool in promoting maternal and neonatal health (Jahn & De Brouwere, 2001). The findings from our studies (II, V) indicate, however, that more efforts are needed to convince the community of the benefits of utilizing the services provided by the midwives at the peripheral level.

National and local practical guidelines have been developed for maternal and newborn health care in both countries. Statistics are also available, which describe the outcome of MHC services. Furthermore, a fair amount of research has been conducted on various aspects of the MHC area in Mozambique, such as maternal mortality, auditing, training paramedical personnel to perform caesarean sections, perinatal health care and abortion (Bergström & Bugalho, 1992; Challis, 2002; Granja, 2002; Machungo, 2002; Osman, Challis, Cotiro, Nordahl, & Bergstrom, 2001; Songane & Bergstöm, 2002). In Angola, on the other hand, research projects related to maternal health and MHC services are few and sporadic (Santos-Ferreira et al., 1990; Schaidler et al., 1999; Strand, Franque-Ranque, Bergstrom, & Weiland, 2003). Common to both countries, though, is the fact that the quality of maternal health care appears to be addressed through medical, technology-based interventions, which can be measured from a quantitative perspective. According to Abou-Zahr et al (1996), this is the result of adopting the modern model of medical care, which does not take into account the experiences the women themselves bring into the process of childbirth, neither does it embrace the experiences of the health professionals. The preliminary results of study III was, however, presented at a large meeting of politicians and the medical profession in Luanda where it created quite astonishing reactions. CAOL acted upon the findings, though by providing name badges for all PDU midwives and arranging unannounced visits to the PDUs during night hours.

There are indications that MHC activities in Mozambique are increasing, and that the government of Mozambique plans to expand basic and comprehensive emergency obstetric care services and integrate these with primary and secondary health care level. Furthermore, the national strategy aim at improving access to reproductive health care services for adolescents and implement appropriate interventions for newborn care (MISAU, 1999). The Mozambican Ministry of Health (MOH) also encourages operational research, partnership in Safe Motherhood issues and advocates changes in laws and regulations from a human right perspective, which may positively impact the health of women and newborn infants (MISAU, 1999).

12.4 INVESTING IN MIDWIFERY – ONE WAY TO IMPROVE QUALITY OF MATERNAL AND PERINATAL CARE

At what cost can the quality of midwifery services be achieved? Can all nations, in particular low-income countries such as the two described in this study, afford quality midwifery care?

Investing in midwifery, is considered to be cost-effective in low-income countries, as it prevents costlier care at a later stage (B.E. Kwast & S. Bergström, 2001). Whereas some studies address the cost-effectiveness of midwifery services, only one has been located that discussed the cost of midwifery education in low-income countries. However, it was not possible to deduce how cost-effective training programmes for midwives in Indonesia were compared to other safe motherhood interventions (Walker et al., 2002). Educating midwives and implementing midwifery services is regarded as cost-effective also in high-income countries as duration of training midwives is shorter and salaries are lower compared to the physicians. It is therefore intriguing to find that cost-effectiveness of midwifery versus medical services barely differs in high-income countries (Hundley et al., 1995; Reinharz, Blais, Fraser, & Contandriopoulos, 2000). However, Levin argues that costs are higher when midwives are under-utilised and physicians are used to carry out interventions, which could be performed by other health professionals (Levin et al., 2000).

Whereas midwifery is not promoted in many parts of the South-Americas, in China and in India, midwifery has been promoted for many years on the African continent. Angola and Mozambique, however, have demonstrated an ambivalent attitude to midwifery as a profession. As a result of post-independency human resource drainage, Angola substituted the training of professional midwives with shorter courses for maternal health nurses. In order to provide coverage of maternal health personnel, quantity was achieved rather than quality. Over the years, maternal health nurses have exercised their duties within the MHC sector, but due to low academic and professional level, their services have not been satisfactory. Angolan midwives used to be highly esteemed by the population, however, the degradation of professional quality and merits have undermined the population's confidence in the profession (MINS/CAOL, 1996), a fact that was confirmed both by the PDU midwives and the women (II, III). A new national post-graduate midwifery course was therefore planned and implemented in 1998 (MINS/CAOL, 1994, 1996). The training of professional midwives was welcomed on all levels within the MOH; however, it will take a substantial amount of time to supply Angola with sufficient number of trained midwives. Investing in midwifery education needs to be seen in a long-term perspective and the impact on maternal health should also be evaluated in this context.

Mozambique has focused on training maternal and infant health nurses and not until recently have initiatives been taken to introduce midwifery as a specialised course. It does not seem clear, though, whether such a course will follow upon completed nursing education or be a direct entry course. The Saude Materno Infantil (SMI) nurses have been encouraged by members of the obstetrical profession to participate in research training courses, and have been actively supported in conducting research and presenting it at international conferences. The midwives in Mozambique also receive encouragement from the MOH to establish a national midwifery organization.

Furthermore, it is encouraging to note that the midwives in Mozambique successfully hosted the Africa Midwives Research Network (AMRN) conference in November 2003.

Unfortunately, well-educated health professionals in low-income countries are often not able to survive on their government salary, a problem, which tends to reduce assiduity as additional income is procured elsewhere. Consequently, the qualities of services offered are often compromised.

Angola allocated 3.6 percent (3.6-6.4%) and Mozambique about 3.9 percent (3.9-11.1%) of its Gross National Product (GNP) to health care expenditures, but it cannot be deduced how much was spent on midwifery services and salaries (UNAIDS/WHO, 2002; WFB, 2000). It is likely, though, that such expenditures are much less than needed, as illustrated by Granja who argued during the defence of her thesis that the midwife's salary was by far the least part of the cost for a legal abortion at HCM in Maputo. A reasonable salary is regarded as an incentive both to improve assiduity and performance (Granja, 2002). The findings of the current study indicate, however, that low salaries were a source of worry to all the midwife respondents (II,V). The low salaries were moreover perceived to contribute to the escalation of the system of informal user-fees in Luanda (K. O. Pettersson et al., unpublished results). It does not seem realistic, at least in the near future, to expect relevant salaries for most health workers, including the midwives. Unfortunately, this situation infers that midwives are obliged to seek financial coverage elsewhere, a fact which either appears to reduce assiduity or make them resort to unhealthy habits like asking women to pay (K. O. Pettersson et al., unpublished results). Whereas this may be understandable, it is not excusable, as the practice subject women in Luanda to unequal access to care. It presents a tremendous challenge for the MOH in Angola and Mozambique, to consider the possibility of improving the quality of maternal and neonatal care through the vehicle of improved conditions for all the professionals involved.

Quality of midwifery services also depends on enabling working conditions, and the dimension 'organising' in the proposed model of change (V) heavily relies on national resource allocation. Unless finances are provided, the labour room cannot be reconstructed to provide the HCM midwives with the possibility to properly monitor the newborn. Fiscal resources are needed to secure electricity, water and transport at the PDUs. The lack of these is also reasons for women's avoidance of care during childbirth. However, midwives may also contribute to reducing expenses by implementing fundamental evidence-based practices such as the skin-to-skin care, which is cost-free (Hodnett, 2000).

Midwives in various parts of the world have, with more or less success, been fighting for acceptance, within and outside the obstetric team. Lugina (2002) argue that there is still a long way to go for midwives in Africa, before they can count on being recognised as valid members of the obstetric team. She considers that this is due to male hegemony and to a rigid professional hierarchy within the health systems. According to the HCM midwives (V), they faced similar problems and alleged that lack of intra- and inter-professional communication and collaboration negatively influenced the quality of perinatal care. The importance of improving inter-professional interaction must therefore be recognised and encouraged by the MHC management as part of the strategy to enhance midwifery (Lugina et al., 2002).

The many problems impacting women and midwives have been considered from different perspectives and at different levels in Angola and Mozambique. Nevertheless, the overall picture indicates that the challenges as well as the constraints facing midwives do not differ much in the two contexts. Women in Luanda have provided us with a view of their reality, which only in future research can be contrasted to the experiences of women from Maputo. Awareness has been created, not only regarding the unenviable position of women in childbirth in these settings, but also the many challenges facing midwives in order to provide care that will promote safe motherhood for vulnerable women.

13 CONCLUSIONS AND IMPLICATIONS

This thesis aimed at exploring the quality of midwifery care at different levels of the maternal health care system in two different countries on the African continent. The studies presented in this thesis appear to represent the relatively few attempts in the context of ‘Safe Motherhood’ to explore quality of care during childbirth from the perspectives of women and midwives whilst concurrently seeking a theoretical understanding of the perceptions of reality held by women and midwives. However, the findings also indicate a variety of obstacles for providing quality of care, which confirm the existing body of knowledge. The importance of focusing, not only on technicalities, but also on the views of the health care users and the health care providers when addressing quality of care, for example, has been emphasised by various writers (Fixelid, 1997; Lugina, 2001; Ransjö Arvidson, 1998).

Despite the contextual differences in which the studies were undertaken, findings appear to be interrelated and may contribute to the body of midwifery knowledge in the context of promoting Safe Motherhood, particularly in respect to the following:

13.1 GAINING INSIGHT INTO WOMEN’S PERCEPTION OF THEIR VULNERABILITY DURING CHILDBIRTH

Civil war and migration disrupt social fabrics and may alter women’s access to social support and modify their adherence to cultural childbirth practices. Moreover, access to maternal health care services are often experienced as unfair and limited due to the demand for informal user-fees, a fact that may explain the low utilization of the PDUs in Luanda. Women may not be convinced to seek institutional care during childbirth unless midwives cease to subject them to such practices.

Women seem to adapt health care seeking behaviour during childbirth in accordance with evolving circumstances and a complex web of influencing factors. Various patterns of care seeking behaviour have been identified. These are considered to be mutually exclusive, but unless tested in a future study, cannot be said to have predictive value. In order to influence women’s health care seeking behaviour positively, midwives need to reflect upon and modify attitudes towards women, adjust caring practices to accommodate women’s needs and desires. The maternal health services may be available within the communities, however, unless they are proven effective at all hours, the population seek care elsewhere or deliver at home.

The concept 'moulding' appears to be a new way of considering challenges and constraints faced by women during childbirth. Just as the foetus experiences 'moulding' during the process of labour with beneficial or harmful effects, the woman's health care seeking behaviour is 'moulded' to fit the many barriers on her way to safe motherhood. It is a challenge to MHC professionals, management and policy makers to consider what can offer the most beneficial possibilities for all women, especially the most vulnerable who are at greatest risk when giving birth.

13.2 GAINING INSIGHT INTO MIDWIVES' PERCEPTIONS OF THEIR ABILITY TO PROVIDE QUALITY CARE DURING CHILDBIRTH

The respondent midwives identified a variety of constraints, which prevented them from providing quality care but also suggested how these might be challenged. The model 'changing perinatal care management' is based on the midwives reflections, and is considered to be valid in both contexts described in this thesis.

A major aspect appears to be the midwives reliance upon supportive mechanisms, enabling communication and collaboration from various levels of the chain of care. Teamwork is considered to be a crucial component when aiming to improve quality of care, and the midwives emphasise the importance of being acknowledged as valid members of the obstetric team. This, however, I believe depend on the presence of a regulatory framework as well as on the midwives own efforts to gain respect and appreciative responses to such efforts.

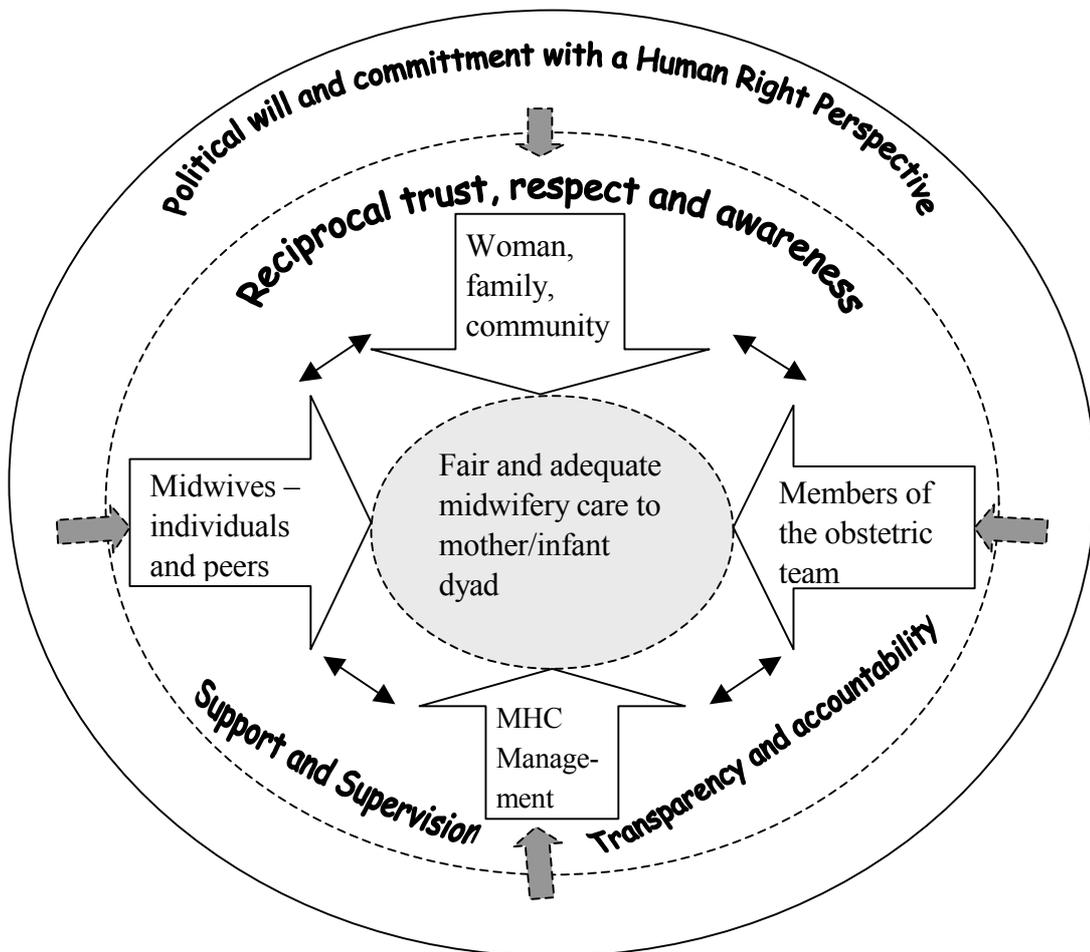
Midwives often express their willingness to accept challenges, for which however, they are not always fully competent. Consequently they also described experiences of psychological strain and fear of failure. It appears that midwives do not inevitably recognise the problems that may undermine the quality of care that they provide, a fact, which might negatively influence the introduction of change, for example implementation of new caring technology. The midwives showed awareness of the need for quality interaction with women in labour, but at times failed to apply this in practice.

Educational interventions are considered as valid tools to improve quality of midwifery care. However, interventions based on typical in-service training models as used in these studies did not give the desired results. It is therefore important to discuss what kind of intervention to use and how to implement and supervise it in order to achieve sustainable changes. It is crucial that the philosophy of training emphasise the midwives' ability to critically reflect and adequately act upon information collected during their practice, in particular related to the partograph. In order for the partograph to be a tool for early warning of arrested and prolonged labour, great efforts are needed to introduce and supervise the use of it. Furthermore, strict guidelines for documentation of the partograph, in particular the initiation of the graph, are required at the referral hospital. Consensus is also needed within the obstetric team regarding who should be responsible for documentation of the partograph.

13.3 GAINING INSIGHT INTO THE CONTEXT REQUIRED FOR PROVISION OF QUALITY OF MIDWIFERY CARE

Quality of midwifery care is a complex issue, which requires more than her/his efforts to achieve. We possess knowledge, for example, of the dimensions of quality of care, the four A's – availability, accessibility, affordability and acceptability (WHO 98.8). We also know how quality of care can be measured – by structure, process and outcome (Donabedian, 1980). It is furthermore clear that quality of care is context bound and culturally related (Leininger, 1991). The findings of these studies also indicate that quality of care at times may be person bound (II, III). It is, however, not easy to define how quality of midwifery care can be achieved within contexts such as the ones described in this thesis. Based on the findings and the experiences from the studies undertaken, I suggest the explanatory model (Figure 5) as a contribution to the existing awareness of how to achieve quality of midwifery care within the Safe Motherhood or 'Making Pregnancy Safer' context.

Figure 5. Fair and adequate midwifery care to the mother/infant dyad.



Political will and commitment within a human right perspective (outer ring) need to be extended to all stakeholders in the childbirth process (grey arrows), women and their social network, midwives, members of team obstetric and MCH management (block arrows). However, in order to provide the mother/infant dyad with fair and adequate care (light grey, inner circle) all stakeholders need to be linked (black arrows) in

reciprocal trust, respect and awareness as well as on support, supervision, transparency and accountability.

14 SUGGESTIONS FOR FUTURE RESEARCH

The voices of women from Mozambique are not heard in this thesis, but this may be addressed in a future study. It would be interesting, for example to test the concept of 'moulding' maternal care-seeking behaviour in Maputo. By designing a questionnaire based on the combination of factors perceived to create the four patterns of behaviour the substantive model (III) might be confirmed and/or improved.

The informal user-fees are only known from the women's side and on a group level. The nature and the magnitude of this problem need to be examined in a survey in order to provide the MOH with hard facts in order to take administrative steps to drastically reduce or abolish it. It would also be a challenge to explore this from the perspective of those accused of being the perpetrators.

Suggestions for future research also include exploring the views of PDU midwives, obstetricians and women in order to make the explanatory model of 'changing perinatal care' (V) more comprehensive and to develop an initial tool in enhancing collaboration and communication strategies. Future research should focus, not so much on the difficulties related to perinatal care, but on the possibilities to circumvent problems and create cost-effective possibilities. The appreciative inquiry method (Barret, 1995) might prove a valuable instrument in achieving this.

15 EPILOGUE

Through all our work, this thesis does not represent the accomplishment of one person only, I have acquired deep respect for my colleagues who on a daily basis struggle in settings where resources are scarce and professional acceptance is limited. My thoughts are with women living in Angola and Mozambique, who face pregnancy and childbirth under conditions that pose potentially life-threatening dangers to the mothers and their newborn infants.

I could therefore not end this discussion without addressing a question, which I am frequently asked; how do women manage under such stressful conditions? The question includes not only women who are subjected to sub-standard maternal health care services, but also those providing them. Why? Because they are also prospective mothers, and therefore inevitably subjected to the potential dangers associated with giving birth. This point was driven home when Elsa, our colleague at the maternal health care project in Luanda died giving birth to her second child due to a complication, which for logistical reasons could not be treated at the peripheral delivery unit or at the referral hospital. How do they cope? Or, do they cope? As I have not conducted research related to coping, I can only philosophise with my personal experience as a basis. I do so in awe and wonder of the strength of these women, and as a tribute to Elsa, who worked diligently to improve the conditions of women in Luanda.

Women who are subjected to long-term suffering from civil war and constant poverty as those in Angola and Mozambique have been, appear to possess a strength, which is not easily understood or explained. However, this strength enables them to cope and survive, perhaps there are no other options at their disposal. When meeting survivors from the Holocaust of the Second World War, Antonovsky questioned why some appeared to maintain their health, physical as well as mental, while others did not. He concluded that a strong “sense of coherence” provided the individual with understanding of internal and external demands (comprehensibility), resources to manage these demands (manageability) and the will to invest and engage in demands made (meaningfulness) (Antonovsky, 1988). Kobasa developed the concept “hardiness” as a personal characteristic, which moderates the effect of stress. “Hardiness” comprises three components which are fairly similar to those proposed by Antonovsky; namely being engaged, having control and facing challenge (Kobasa, 1979).

Viktor Frankl addressed the concept “meaningfulness” and he argued that “man’s search for meaning is an essential force and not a secondary rationalising of instinctive urges”. He also states “the meaning of life differentiates from person to person, from day to day and from hour to hour. The essential is therefore not the meaning of life in general, but rather the specific meaning of a person’s life within a given situation”. When a person faces an unavoidable situation, the affliction must be given a meaning as it then will cease to be experienced as suffering (Frankl, 1986). The logotherapy theory (Frankl, 1986) recognises and uses the spiritual resources of an individual’s religious conviction to facilitate adaptation.

I believe that the significance of the existentialistic dimension cannot be excluded in most African contexts as the issue of life and death appear to be commonly embedded in human existence, no matter whether or what religion the individual may confess. The woman who every morning passed my house on her way to the cassava field in Liberia may illustrate this. She had animated discussions with her dead ancestors, but made a pause to greet me before she continued her arguments with the invisible audience. Furthermore, the manner in which God is included in daily conversation may indicate recognition of a dimension in life that provides women and midwives with “meaning” that may even be a major motivating factor for coping with the many challenges and constraints that they face. The same familiarity with the divine is not so often customary in a secular or materialistic context where the risks associated with life are not perceived to challenge the sense of certainty or security in everyday life.

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17 REFERENCES

- AbouZahr, C., Vlassoff, C., & Kumar, A. (1996). Quality health for women: a global challenge. *Health Care for Women International*, 17, 449-467.
- Amooti Kaguna, B., & Nuwaha, F. (2000). Factors influencing choice of delivery sites in Rakai district of Uganda. *Social Science Medicine*(50), 203 - 215.
- Andersson, T. (2000). *Survival of mothers and their offspring in 19th century Sweden and contemporary rural Ethiopia*. Umeå University, Umeå.
- Antonovsky, A. (1988). *Unraveling the mystery of health*. San Fransisco: Jossey-Bass Publishers.
- Armenakis, A. A. (1999). *Organisational change: a review of theory and research in the 1990's*. Retrieved December 19, 2002
- Baden, S. (1997). *Post-conflict Mozambique: Women's special situation, Population Issues and Gender Perspectives*. Geneva: International Labour Office.
- Balfour, M., & Clarke, C. (2001). Searching for sustainable change. *Journal of Clinical Nursing*, 10(1), 44-50.
- Barbour, R. S., & Kitzinger, J. (1999). *Developing focus group research*. London: SAGE.
- Barret, F. J. (1995). Creating appreciative learning cultures. *Organizational Dynamics*, 24 (1), 36-49.
- Bartlett, L., Jamiesson, D., Kahn, T., Sultana, M., Wilsson, H., & Duerr, A. (2002). Maternal mortality among Afghan refugees in Pakistan, 1999-2000. *The Lancet*, 359, 643-649.
- Benner, P. (1984). *From Novice to Expert. Excellence and Power in Critical Nursing*. Addison-Wesley, California.
- Bennett, V. R., & Brown, L. K. (1989). *Myles Textbook for Midwives*. London: Churchill Livingstone.
- Bergström, S. (2001). Quality and audit of maternity care. In J. B. Lawson, A. H. Kelsey & S. Bergström (Eds.), *Maternity Care in developing Countries*. London: RCOG Press.
- Bergström, S., & Bugalho, A. (1992). Perinatal audit of one hundred consecutive vacuum extractions in Maputo. *Gynecology and Obstetric Investigation*, 34(3), 171-174.
- Bland, M. (2000). *An introduction to medical statistics* (Third ed.). Oxford New York: Oxford University Press.
- Bogg, L. (2002). *Health Care Financing in China: Equity in Transition*. Karolinska Institutet, Stockholm.
- Bogg, L., Wang, K., & Diwan, V. (2002). Chinese maternal health in adjustment: claim for life. *Reprod Health Matters*, 10(20), 95-107.
- Brieger, W. R., Luchok, K., Eng, E., & Earp, J. A. (1994). Use of maternity services by pregnant women in a small Nigerian community. *Health Care for Women International*, 15, 101-110.
- Briscoe, L. (2003). *Exploration of women asylum seeker and refugee's experience of midwifery care*. Paper presented at the Africa Midwife Research Network, Maputo.
- Brolin, L., & Wessel, H. (1999). *The Maternal health Program in Angola. An assessment of the program during 1988-1999*. Stockholm: Swedish International Development Agency, Sida.

- Burns, N., & Grove, S. K. (1993). *The Practice of Nursing Research. Conduct, Critique and Utilization*. Philadelphia: W.B. Saunders Company.
- Campos, P., & Corado, A. (1991). *Normas clínicas para maternidades periféricas de Luanda [Clinical guidelines for PDUs in Luanda]*. Luanda: Ministério de Saúde.
- Campos, P. A., Costa, B., de Freitas, E., Gama, F., Nogueira, A., Oliveira, J., et al. (Unpublished). *Estudo do partograma como instrumento de transferência de grávida de risco [A study of the partograph as an instrument of transferring risk pregnancies]*. Luanda: Faculdade de Medicina. Departamento de Obstetrícia - Ginecologia.
- CAOL. (2001). *Relatório de Actividades 2000 [Activity Report 2000]*. Luanda: Coordenação de Atendimento Obstétrico de Luanda.
- Challis, K. (2002). *Monitoring pregnancy for improved perinatal outcome in Mozambique*. Karolinska Institutet, Stockholm.
- Cheah, F., & Boo, N. (2000). Risk factors associated with neonatal hypothermia during cleaning of new infants in labour rooms. *Journal of Tropical Pediatrics*, 46(1), 46-50.
- Chipfakacha, V. (1994). Attitudes of women towards traditional midwives - a survey in the Kgalagadi (Kalahari) region. *South African Medical Journal*, 84, 30-32.
- Christensson, K. (1994). *Care of the Newborn Infant. Satisfying the Need for Comfort and Energy Conservation*. Karolinska Institutet, Stockholm.
- Christensson, K., Bhat, G. J., Amadi, B. C., & et.al. (1998). Randomized study of skin to skin versus incubator care for rewarming low-risk hypothermic neonates. *The Lancet*, 352(1115).
- Christensson, K., Bhat, G. J., & Eriksson, B. (1995). The effect of routine care on the health of the hypothermic newborn infants in Zambia. *Journal of Tropical Pediatrics*, 41(4), 210-214.
- Christensson, K., Ransjö Arvidson, A., Kakoma, C., Lungo, F., Darkwah, G., Chikamta, D., et al. (1988). Midwifery care routines and prevention of heat loss in the newborn. A study in Zambia. *Journal of Tropical Pediatrics*, 34, 208-212.
- Cook, C. (2002). The effects of skilled health attendants on reducing maternal deaths in developing countries: testing the medical model. *Evaluation and Program Planning*, 25, 107-116.
- Cook, R. J., & Dickens, B. M. (2002). Human rights to safe motherhood. *International Journal of Gynecology and Obstetrics*, 76, 225-231.
- Coudhary, S., Bajaj, R., & Gupta, R. (2000). Knowledge, attitude and practices about neonatal hypothermia among medical and paramedical staff. *Indian Journal of Pediatrics*, 67(7), 491-496.
- Creswell, J. (1998). *Qualitative Inquiry and Research Design. Choosing among five traditions*. Thousand Oaks: Sage Publications Inc.
- De Brouwere, V., & Lerberghe, W. (2001). *Safe Motherhood Strategies: A Review of the Evidence*. Antwerp: ITGpress.
- De Brouwere, V., Tonglet, R., & Lerberghe, W. V. (1998). Strategies for reducing maternal mortality in developing countries: what can we learn from the history of the industrialized West? *Tropical Medicine and International Health*, 3(10), 771-782.

- Dellve, L., & Abrahamsson, K. K. (2002). Grounded theory in public health research. In L. Hallberg (Ed.), *Qualitative Methods in Public Health Research. Theoretical foundations and Practical examples*. Lund: Studentlitteratur.
- Deng, F. M. (1997). *Profiles in Displacement: Mozambique*. New York: Human Rights Institute.
- Dgedge, C. E. (2003). *How Midwives protect themselves from contaminated body fluids*. Paper presented at the Africa Midwives Research Network, Maputo.
- Donabedian, A. (1980). *The definition of quality and approaches to its assessment*. Ann Arbor (Michigan): Health Administration Press.
- Donnay, F. (2000). Maternal survival in developing countries: what has been done, what can be achieved in the next decade. *Int J Gynaecol Obstet*, 70(1), 89-97.
- Dragovich, D., Tamburlini, G., Alisjahbana, A., Kambarami, R., Karagul Lincetto, O., Malla, D., et al. (1997). Thermal control of the newborn: knowledge and practice of health professionals in seven countries. *Acta Paediatrics*, 86(6), 645-650.
- Ejlertsson, G. (1992). *Grundläggande statistik [Basic statistics]*. Lund: Studentlitteratur.
- Emmelin, M. (1999). Fokusgruppdiskussionen som kvalitativ datainsamlingsmetod [The focus group discussion as qualitative data collection method]. In G. Bring, B. Nilsson, G. Westman & et.al. (Eds.), *Kvalitativ metod som praktik*. Lund: Studentlitteratur.
- Eriksson. (1996). *Joint Evaluation of Emergency Assistance to Rwanda. The International Response to Conflict and Genocide. Book 4. Rebuilding Post-war Rwanda*. Odense.
- Essen, B., Bodker, B., Sjöberg, N., Gudmunsson, S., Ostergren, P., & Langhoff-Roos, J. (2002). Are some perinatal deaths in immigrant groups linked to suboptimal perinatal care services? *British Journal of Obstetric and Gynaecology*, 109(6), 677-682.
- Essen, B., Hansson, B., Ostergren, P., Lindquist, P., & Gudmunsson, S. (2000). Increased perinatal mortality among sub-Saharan immigrant city-population in Sweden. *Acta Obstet Gynecol Scand*, 79(9), 737-743.
- Faxelid, E. (1997). *Quality of care for patients with sexually transmitted diseases in Zambia*. Karolinska Institutet, Stockholm.
- Fiedler, J. (1981). A review of the literature on access to and utilization of medical care with special emphasis on rural primary care. *Social Science and Medicine*, 15, 129-142.
- Frankl, V. (1986). *Livet måste ha mening [Man's search for meaning]*. Lund: Bokförlaget natur och Kultur.
- Garner, P., Lai, D., & Baea, M. (1994). Childbirth in rural areas: maternal deaths, village deliveries and obstetric service use. *Papua New Guinea Medical Journal*, 37(3), 166-172.
- Gibson, C. H. (1991). A concept analysis of empowerment. *Journal of Advanced Nursing*, 16, 354 - 361.
- Gilson, L. (1997). The lesson of user-fee experience in Africa. *Health Policy Planning*, 12, 273-285.
- Glaser, B. (1978). *Theoretical Sensitivity*. Mill Valley: Sociology Press.
- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory*. Chicago: Aldine.

- Glaser, B. (1992). *Basics of grounded analysis: emergence vs. forcing*. Mill Valley: Sociology Press.
- Granja, A. C. L. (2002). *Maternal Deaths in Mozambique: An audit approach with special reference to adolescence, abortion and violence*. Karolinska Institutet, Stockholm.
- Gwatkin, D. (2002). *Reducing health inequalities in developing countries: Oxford Textbook of Public Health*. Oxford: Oxford University Press.
- Gwatkin, D. R. (2000). Health inequalities and the health of the poor: What do we know? What can we do? *Bulletin of the World Health Organization*, 78, 3-17.
- Hamberg, K. (1998). *Begränsade möjligheter - anpassade strategier. En studie i primärvården av kvinnor med värk [Limited possibilities - adapted strategies. A study in the the primary care of women with aches]*. Umeå University.
- Hamberg, K., Johansson, E., & Lindgren, G. (1994). Scientific rigor in qualitative research - examples from a study of women's health in family practice. *Family Practice*, 11(2), 176-180.
- Heideman, E. G. (1993). *The contemporary use of standards in health care*. (No. WHO/SHS/DHS/93.2). Geneva: World Health Organization.
- Hengjin, D. (2000). *Health Financing Systems & Drug Use in Rural China*. Unpublished Medical, Karolinska Institute, Stockholm.
- Hildingh, C. (1996). *Self-help groups related to coronary heart disease. Lay and Nursing Support*. Göteborg Universitet, Göteborg.
- Hodgkin, D. (1996). Household characteristics affecting where mothers deliver in rural Kenya. *Health Econ*, 5(4), 333-340.
- Hoque, A., & Selwyn, B. J. (1996). Birth practice patterns in urban slums of Dhaka, Bangladesh. *Women Health*, 24(1), 41-58.
- Hundley, V., Donaldson, C., Lang, G., Cruikshank, F., Glazener, C., Milne, J., et al. (1995). Costs of intrapartum care in a midwife-managed delivery unit and a consultant led labour ward. *Midwifery*, 11(3), 103-109.
- Hynes, M. (2002). Reproductive health indicators and outcomes among refugee and internally displaced persons in post-emergency phase camps. *Journal of the American Medical Association*, 288(5), 595-603.
- Högberg, U. (1983). *Svagårens barn [The children of the poor years]*. Stockholm: LiberFörlag.
- Högberg, U. (1985). *Maternal mortality in Sweden*. Umeå University, Umeå.
- INE. (1997). *Censo 97, II recenseamento geral da população e habitação [Census 97, the 2nd general census of population and habitation]*. Maputo: Instituto Nacional de Estatística.
- Jahn, A., & De Brouwere, V. (2001). Referral in pregnancy and childbirth: concepts and strategies. In V. De Brouwere & W. V. Lerberghe (Eds.), *Safe motherhood strategies: a review of the evidence*. Antwerp: ITGPress.
- Jewkes, R., Abrahams, N., & Mvo, Z. (1998). Why do nurses abuse patients? Reflections from South African obstetric services. *Social Science Medicine*, 38, 1069-1073.
- Johansson, A. (1998). *Dreams and dilemmas - women and family planning in rural Vietnam*. Karolinska Institutet, Stockholm.
- Johansson, E. (2000). *Emerging perspectives on tuberculosis and gender in Vietnam*. Umeå University, Sweden, Umeå.

- Kelsey, A. H., & Bergström, S. (2001). Poverty, deprivation and unsafe motherhood. In J. B. Lawson, A. H. Kelsey & S. Bergström (Eds.), *Maternity Care in Developing Countries*. London: RCOG Press.
- Killingsworth, J., Hossain, N., Hedric-Wong, Y., Thomas, S., Rahman, A., & begum, T. (1999). Unofficial fees in Bangladesh: price, equity and institutional issues. *Health Policy and Planning, 14*(2), 152-163.
- Kirubakaran, R., & Deepal, K. A. (1997). A partogram to reduce maternal and infant morbidity and mortality. *National Medical Journal of India, 10*(3), 152-153.
- Kobasa, S. C. (1979). Stressful life events, personality and health. An inquiry into hardiness. *Journal of Personality and Social Psychology, 137*, 1-11.
- Koblinsky, M. A. (1995). Beyond maternal Mortality - magnitude, interrelationship and consequences of women's health, pregnancy related complications and nutritional status on pregnancy outcome. *International Journal of Gynaecology and Obstetrics, Suppl. 21-23*.
- Koch, T. (1994). Establishing rigor in qualitative research: the decision trail. *Journal of Advanced Nursing, 19*, 976-986.
- Kowalewski, M., & Jahn, A. (2001). Health professionals for maternity services: experiences on covering population with quality maternal care. In V. De Brouwere & W. V. Lerberghe (Eds.), *Safe motherhood strategies: a review of the evidence*. Antwerp: ITGPress.
- Krueger, R. A. (1994). *Focus Groups. A Practical Guide for Applied Research*. London: Sage Publications Ltd.
- Kumar, R., & Aggarwal, A. K. (1998). Body temperatures of home delivered newborns in north India. *Trop Doct, 28*(3), 134-136.
- Kunst, A. E., & Houwelling, T. (2001). A global picture of poor-rich differences in the utilization of delivery care. In V. De Brouwere & W. V. Lerberghe (Eds.), *Safe Motherhood strategies: a review of the evidence*. Antwerp: ITGPress.
- Kvale, S. (1997). *Den kvalitativa forskningsintervjun [The qualitative research interview]*. Lund: Studentlitteratur.
- Kwast, B. E. (1991). Midwives' role in safe motherhood. *Journal of Nurse-Midwifery, 36*(6), 366-372.
- Kwast, B. E. (1998a). Quality of care in reproductive health programs: concepts, assessments, barriers and improvements - an overview. *Midwifery*(14), 66-73.
- Kwast, B. E. (1998b). Quality of care in reproductive health programs: education for quality improvement. *Midwifery*(14), 131-136.
- Kwast, B. E., & Bentley, J. (1991). Introducing confident midwives: Midwifery education for Safe Motherhood. *Midwifery, 7*(1), 8-19.
- Kwast, B. E., & Bergström, S. (2001). Training professionals for safer motherhood. In J. B. Lawson, K. A. Harrison & S. Bergström (Eds.), *Maternity Care in Developing Countries*. London: RCOG Press.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer Publishing Co.
- Leininger, M. (1991). *Culture care diversity and universality: a theory of nursing*. New York: National League for Nursing.
- Lennox, C. E., & Kwast, B. E. (1995). The partograph in community obstetrics. *Trop Doct, 25*(2), 56-63.

- Levin, A., McEuen, T., Dymatraczenko, F., Ssengooba, R., Mangani, R., & Van Dyck, G. (2000). *Maternal health costs in three African countries*. Retrieved from: <http://www.abtassoc.com/reports2003>
- Liljestrand, J. (1998). *Supporting Midwifery*. Stockholm: Swedish International Development Agency Cooperation (Sida).
- Liljestrand, J. (2000). Strategies to reduce maternal mortality worldwide. *Curr Opin Obstet Gynecol*, 12(6), 513-517.
- Liljestrand, J., Dahlbäck, E., & Åkesson, H. (1993). *Saúde sexual e reproductiva em Angola [Sexual and reproductive health in Angola]*. Stockholm: Swedish International Development Agency (Sida).
- Lincetto, O., Nazir, A. I., & Cattaneo, A. (2000). Kangaroo Mother Care with Limited Resources. *Journal of Tropical Pediatrics*, 46, 293-295.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. London: Sage Publications.
- Lindgren, E. C. (2002). *Empowering young female athletes - a possible challenge to the male hegemony in sport*. Göteborg, Göteborg.
- Lindstrand, A., Bergström, S., Stenson, B., & Rosling, H. (2003). *Global Health . An introductory textbook*. Stockholm: Unpublished.
- Lugina, H. I. (2001). *Women's postpartum concerns and midwives' reflection on postpartum care*. Uppsala University, Uppsala.
- Lugina, H. I., Johansson, E., Lindmark, G., & Christensson, K. (2002). Developing a theoretical framework on postpartum care from Tanzanian midwives' views on their role. *Midwifery*, 18(1), 12-20.
- Machungo, F. (2002). *Maternal outcome of pregnancy in Mozambique with special reference to abortion-related morbidity and mortality*. Karolinska Institutet, Stockholm.
- Maclean, G. (2003). The challenge of preparing and enabling 'skilled attendants' to promote safer childbirth. *Midwifery*, 19(23), 163-169.
- MacNeil, J. (1996). Use of Culture Care Theory with Baganda Women as AIDS caregivers. *Journal of Transcultural Nursing*, 7(2), 14-20.
- Mahler, H. (1987). The Safe Motherhood Initiative: A call for Action. *The Lancet*, March 21, 668-670.
- Maimbolwa, M. C. (2004). *Maternity Care in Zambia. With special reference to social support*. Karolinska Institutet, Stockholm.
- Maimbolwa, M. C., Ransjö-Arvidson, A. B., Ng'andu, N., Sikawze, N., & Diwan, V. (1997). Routine care of women experiencing normal deliveries in Zambian maternity wards: a pilot study. *Midwifery*, 13(3), 125-131.
- Maxwell, J. A. (1996). *Qualitative research design: An interactive approach* (Vol. 41). London: Sage Publications.
- Mbaruku, M., & Bergström, S. (1995). Reducing maternal mortality in Kigoma, Tanzania. *Health Policy and Planning*, 10(1), 71-78.
- McGinn, T. (2000). Reproductive Health of War-affected Populations: What Do We Know? *Family Planning Perspectives*, 26(4), 174-180.
- McPake, B., Asiimwe, D., Mwesigye, F., Ofumbi, M., Ortenblad, L., Streefland, P., et al. (1999). Informal economic activities of public health workers in Uganda: implications for quality and accessibility of care. *Soc Sci Med*, 49, 849-865.
- Miller, J. E., & Petro-Nustas, W. (2002). Context of care for Jordanian women. *Journal of Transcultural Nursing*, 13(3), 228-236.

- MINS/CAOL. (1994). *Proposta do Prjecto: Melhorar o nivel da assistência materna em Angola*[Project proposal: Improving maternal health care in Angola]. Luanda: Ministerio de Saúde, CAOL.
- MINS/CAOL. (1996). *Curriculum para formação regular de parteiras á nível nacional* [Curriculum for national midwifery education]. Luanda: MINS/CAOL.
- MISAU. (1998). *Revisão de Mortes Maternas em Mozambique* [Revision of maternal deaths]. Maputo: Ministério de Saúde.
- MISAU. (1999). *Avaliação das Necessidades para uma Maternidade Segura em Mozambique* [Needs assessment for safe motherhood in Mozambique]. Maputo: Ministério de Saúde.
- Mngadi, P., Zawane, I., Ransjo-Arvidsson, A., Ahlberg, B., & Thembi, I. (2002). Quality of maternity care for adolescent mothers in Mbabane, Swaziland. *International Nursing Review*, 49(1), 38-46.
- Morgan, M. (1996). Prenatal care of African-American women in selected USA urban and rural contexts. *Journal of Transcultural Nursing*, 7(2), 3-9.
- Nag, M. (1994). Beliefs and practices about food during pregnancy. Implications for maternal nutrition. *Economic and Political Weekly.*, September 10, 2427-2438.
- Nahar, S., & Costello, A. (1998). The hidden cost of "free" maternity care in Dhaka, Bangladesh. *Health Policy and Planning*, 13, 417-422.
- Nutbeam, D. (1998). Health promotion glossary. *Health Promotion International*, 13(14), 349 - 364.
- Olaniran, N., Offiong, S., Ottong, J., Asuquo, E., & Duke, F. (1997). Mobilizing the community to utilize obstetric services, Cross River State, Nigeria. The Calabar PMM Team. *Int J Gynaecol Obstet*, 59 Suppl 2, S181-189.
- Opuko, S. A., Kyei-Faried, S., Twum, S., Djan, J., Browne, E., & Bonney, J. (1997). Community education to improve utilization of emergency obstetric services in Ghana. The Kumasi PMM Team. *International Journal of Gynaecology and Obstetrics*, 59(Suppl 2), 201-207.
- Osman, N., Challis, K., Cotiro, M., Nordahl, G., & Bergstrom, S. (2001). Perinatal outcome in an obstetric cohort of Mozambican women. *J Trop Pediatr.*, 28(4), 303-306.
- Oxford. (2000). *Oxford Advanced Learner's Dictionary*. Oxford: Oxford University Press.
- Oxford (Ed.). (1980). *Oxford Advanced Learner's Dictionary*. Oxford: Oxford University Press.
- Palmer, C. A. (1998). *Reproductive health for displaced populations*. London: Overseas Development Institute.
- Patton, M. Q. (1987). *How to Use Qualitative Methods in Evaluation*. California: Sage Publications Inc.
- Patton, M. Q. (1989). *Qualitative evaluation methods*. Newbury Park: Sage Publications Inc.
- Pehrsson, K. (2000). *Towards gender equality in Angola*. Stockholm: Swedish International Development Cooperation Agency (Sida).
- Pettersson, K., Christensson, K., Gomes de Freitas, E., & Johansson, E. (2004). Adaptation of health care seeking behavior during childbirth: Focus group discussions with women living in the suburban areas of Luanda, Angola. *Health Care for Women International*, 25(3). In press.

- Pettersson, K. O., Christensson, K., Gomes de Freitas, E., & Johansson, E. (unpublished results). Confronting the issue of informal user-fees.
- Philpott, R. (1972). Graphic records in labour. *British Medical Journal*, 4, 163-165.
- Pope, C., & Mays, N. (1999). *Qualitative Research in Health Care*. London: BMJ books.
- Ransjö Arvidson, A. B. (1998). *Childbirth Care in Affluence and Poverty. Maternity care routines in Sweden and Zambia*. Karolinska Institutet, Stockholm.
- Rasch, V., Muhammad, H., Urassa, E., & Bergstöm, S. (2000). Self-Reports of Induced Abortion: An Empathetic Setting can Improve the Quality of Data. *American Journal of Public Health*, 90, 1141-1144.
- Reinharz, D., Blais, R., Fraser, W. D., & Contandriopoulos, A. P. (2000). Cost-effectiveness of midwifery services vs. medical services in Quebec. L'Equipe D'Evaluation des Projets-Pilotes Sages-Femmes. *Canadian Journal of Public Health*, 91(1), 112-115.
- Rodwell, C. M. (1996). An analysis of the concept of empowerment. *Journal of Advanced Nursing*, 23, 305-313.
- Roemer, M. I., & Montoya-Aguilar, C. (1988). *Quality assessment and assurance in primary health care*. (No. 105). Geneva: World Health Organization.
- Romlid, C. (1998). *Makt, motstånd och förändring [Power, resistance and change]*. Uppsala University, Uppsala.
- Rosenfield, A., & Maine, D. (1985). Maternal mortality - a neglected tragedy. Where is the M in MCH. *Lancet*, 2, 83-85.
- Rydén, O., & Stenström, U. (1994). *Hälsopsykologi [Health psychology]*. Stockholm: Bonniers.
- Salomonsson, S. (1995). *Health Profile Angola*. Stockholm: Swedish International Development Agency (Sida).
- Santos-Ferreira, M., Cohen, T., Lourenco, M., Almeida, M., Chamaret, S., & Montagnier, L. (1990). A study of seroprevalence of HIV-1 and HIV-2 in six provinces of People's republic of Angola: clues to the spread of HIV infection. *Journal of Acquired Immune Deficiency Syndrome*, 3(8), 780-786.
- Saugstad, O. D. (2001). Resuscitation of the asphyctic newborn infant: new insight leads to new therapeutic possibilities. *Biology of the neonate*, 79(258-260).
- Schaider, J., Ngonyani, S., Tomlin, S., Rydman, R., & Roberts, S. (1999). International maternal mortality reduction: outcome of traditional birth attendant education and intervention in Angola. *Journal of Medical Systems*, 23(2), 99-105.
- Schuitmacher, B., Gravenhorst, J., Van Geijn, H., Dekker, G., & Van Dongen, P. (1991). Maternal mortality and its prevention. *European Journal of Obstetrics, Gynaecology and Reproductive Biology*, 425(Suppl), 31.35.
- Scwandt, T. A. (1994). Constructivist, Interpretivist Approaches to Human Inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research*. Thousand Oakes: Sage Publications.
- Shreedeh, M. A. (1998). *The association between selected psychological factors and baby's birth weight among babies born in Sarawak general hospital 1997.*, University of Malaysia, Sarawak.
- Sim, J. (1998). Collecting and analyzing qualitative data: issues raised by the focus group. *Journal of Advanced Nursing*, 28(2), 345-352.

- Songane, F. F., & Bergstöm, S. (2002). Quality of registration of maternal deaths in Mozambique: a community-based study in rural and urban areas. *Social Science Medicine*, 54, 23-31.
- Starrs, A. (1997). *The Safe Motherhood Action Agenda: Priorities for the next decade: Report of a Safe Motherhood Technical Consultation*. Sri Lanka: Family Care International, New York.
- Stenberg, H. (1999). En impressionistisk reseskildring från vetenskapliga domäner [An impressionistic travel description from scientific domains]. In G. Bring, B. Nilsson & G. Westman (Eds.), *Kvalitativ metod som praktik. Erfarenhet av att forska kvalitativt vid medicinska fakultet [Qualitative method in practice. Experience of conducting qualitative research at medical faculties]*. Lund: Studentlitteratur.
- Strand, R., Franque-Ranque, M., Bergstrom, S., & Weiland, O. (2003). Infectious etiology of jaundice among pregnant women in Angola. *Scand J Infect Dis.*, 35(6-7), 401-403.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative Research. Grounded Theory Procedures and Techniques*. London: Sage Publications Inc.
- Strauss, A., & Corbin, J. (1998). *Basics of Qualitative Research. Techniques and Procedures for Developing Grounded Theory*. London: Sage Publications Inc.
- Suls, J., & Fletcher, B. (1985). The relative efficacy of avoidant and non avoidant coping strategies: a meta-analysis. *Health Psychology*, 4, 249-288.
- Svensson, P. G., & Starrin, B. (1996). *Kvalitativa studier i teori och praktik [Qualitative studies in theory and practice]*. Lund: Studentlitteratur.
- Taylor, S., & Bodgan, R. (1984). *Introduction to qualitative research methods*. New York: John Wiley & Sons Inc.
- The concise Oxford dictionary. (2001). *The concise Oxford dictionary*. Oxford: Oxford University Press.
- Umezulike, A. C., Onah, H. E., & Okaro, J. M. (1999). Use of the partograph among medical personnel in Enugu, Nigeria. *Int J Gynaecol Obstet*, 65(2), 203-205.
- UNAIDS/WHO. (2002). *Epidemiological Fact Sheets on HIV/AIDS and Sexually Transmitted Infections*. Retrieved December 29, 2003
- UNDAF. (2000). *Common Country Assessment Report*. Retrieved 07 12 2001, 2000
- Walker, D., McDermott, J., Fox-Ruby, J., Tanjung, M., Nadjib, M., Widiatmoko, D., et al. (2002). An economic analysis of midwifery training programmes in South Kalimantan, Indonesia. *Bull World Health Organ*, 80(1), 47-55.
- Van den Heuvel, O. A., De Mey, W. G., Buddingh, H., & Bots, M. L. (1999). Use of maternal care in a rural area of Zimbabwe: a population-based study. *Acta Obstetrica et Gynecologica Scandinavica*, 78, 838-846.
- Vangeenderhuysen, C., Renaudin, P., & Vall, M. I. (2001). The delivery record: a help to make the right decision. *Sante*, 11(4), 259-263.
- Varkevisser, C. M., Pathmanathan, I., & Brownlee, A. (1991). *Designing and conducting health system research projects. Health systems research training series*. (No. Volume 2.). Ottawa: International Development Research Center.
- Webb, C., & Kevern, J. (2001). Focus groups as a research method: a critique of some aspects of their use in nursing research. *Journal of Advanced Nursing*, 33(6), 798-805.
- WFB. (2000). *World Fact Book*. Retrieved from: <http://www.cia.gov/cia/publications/factbook2003>

- WHO. (2000). *The World Health Report 2000. Health Systems: Improving Performances*. Geneva: World Health Organization.
- WHD.98.8. *Improve the Quality of Maternal Health Services*. Geneva: World Health Organization.
- WHO. (2002). Making Pregnancy Safer - a strategy for action. *Safe Motherhood*, 29(1), 5-6.
- WHO/FCH/RHR. (2001). *Perinatal and Neonatal Mortality: Global; Regional and Country Estimates, second edition*. Geneva: World Health Organization.
- WHO/FHR/MSM/96.7. (1996). *Perinatal Mortality*. Geneva: World Health Organization.
- WHO/FRH/MSM.11. (1996). *Revised 1990 Estimates of Maternal Mortality: A New Approach by WHO and UNICEF*. Geneva: World Health Organization.
- WHO/FRH/MSM/96.1-6. (1996). *Midwifery training modules*. Geneva: World health Organization.
- WHO/MCH.3. (1991). *Midwifery Education for Safe Motherhood. Report of a collaborative Pre-congress workshop in Kobe, Japan*. Geneva: World Health Organization.
- WHO/MCH/88.3. (1988). *The Partograph. A managerial tool for the prevention of prolonged labour. Section I. The principle and the strategy*. Geneva: World Health Organization.
- WHO/MCH/89.1. (1989). *The Partograph. Guidelines for operations research on the application of the partograph*. Geneva: World health Organization.
- WHO/RHR/00.13. (2000). *Reproductive health during conflict and displacement*. Geneva: World Health Organization.
- WHO/RHT/MSM.28. (1996). *Coverage of Maternity Care: A Listing of Available Information*. Geneva: World Health Organization.
- WHO/RHT/MSM/97.3. (1995). *Strengthening midwifery within safe motherhood*. Geneva: World Health Organization.
- WHO/UNFPA/UNICEF/WB. (1999). *Reduction of maternal mortality*. Geneva: World Health Organization.
- Wulf, D. (1994). *Refugee Women and Reproductive Health Care: Reassessing Priorities*. New York: Women's Commission for Refugee Women and Children.
- Vunge, A. (2001). Deslocados sem identidade cultural. *Figuras e negócios.*, 2, 22-25.
- www.idpproject.org/IDP_table.htm. (2002). *Available country profiles and estimates of number of IDPs*. Retrieved 07 14, 2003
- www.savethechildren.org/publications. (2003). *State of the World's Mothers*. Retrieved August 15, 2003
- Wycoff, J. (1991). *Mind mapping: your personal guide to exploring creativity and problem-solving*. New York: Berkley Brooks.
- Yaffre, Y., & Prual, A. (1994). Midwives in Niger: an uncomfortable position between social behavior and health care constraints. *Social Science Medicine*, 38(8), 1069-1073.
- Yu, V. (2003). Global, regional and national perinatal and neonatal mortality. *Journal of Perinatal Medicine*, 31(5), 376-379.