

**The Utilization of the Partograph by Midwives in
Lebowakgomo and Zebediela Level 1 Hospitals in the
Capricorn District of the Limpopo Province, South Africa**

by

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A Mini-Dissertation Submitted in Partial Fulfillment of the
Requirements for the Degree

Master Curationis

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March 2011

DECLARATION

I, Morogwana Anna Shokane, declare that this dissertation, “The Utilization of the Partograph by Midwives in Lebowakgomo and Zebediela Level 1 Hospitals in the Capricorn District of the Limpopo Province, South Africa” hereby submitted to the University of Limpopo for the degree of Masters of Curationis has not previously been presented by me for a degree at this or any other university or institution, that it is my own work in design and in execution, and that all material contained herein has been duly acknowledged.

MA Shokane :

Date Signed :

DEDICATION

This thesis is dedicated to my two late grandmothers, Anna Morogwana Mohlala and Mmakekana Rose Masemola who for some reason both died on the 19th of July 2010. They will always be missed. May their souls rest in peace.

ACKNOWLEDGEMENTS

I would like to thank God, the Almighty, for the life that He has given me and for making this study a success.

Thanks to my mom and dad for bringing me up to where I am today.

I would also like to thank my husband, Augustine Shokane, for being my pillar of strength and for supporting me throughout the study.

To my two children, Petrus and Frans, thanks for understanding when mom could not provide for your needs because she was very busy with her studies.

My special acknowledgement to the staff at Lebowakgomo and Zebediela Hospitals for taking part in the study.

Thanks very much to my supervisor, Mrs M K Thopola, and my co-supervisor, Dr M N Jali, for showing me the light and giving me the strength to pull through even when it was tough. Your good work will always be appreciated and God will bless you all.

Prof DC Hiss, Department of Medical Biosciences, University of the Western Cape, for the care he has taken in editing the manuscript.

ABSTRACT

Introduction and aim: Globally it is of paramount importance that all pregnant women in labour are monitored by midwives utilizing a partograph so that a live baby is delivered. Midwives seemed not to utilize the partograph correctly when monitoring women in labour. The purpose of this study was to determine the utilization of the partograph by midwives in the labour wards of Lebowakgomo and Zebediela level 1 hospitals in the Capricorn District of the Limpopo Province, South Africa. The research question was, “What skills and knowledge do midwives have on the utilization of the partograph for monitoring pregnant women in labour”. The objectives of this study were to explore and describe the utilization of the partograph by midwives in Lebowakgomo and Zebediela level 1 hospitals in the Capricorn District of the Limpopo Province, and to develop guidelines that would assist midwives to effectively utilize the partograph hence provision of quality midwifery care.

Research Design and method: The research design was qualitative, descriptive, explorative and contextual in nature. The population comprised all midwives registered with the South African Nursing Council and practicing as such in Lebowakgomo and Zebediela level 1 hospitals. A purposive sampling technique was used to select 15 participants. Data were collected using semi-structured in-depth interviews with a guide. The semi-structured in-depth interviews were conducted until data were saturated. Trustworthiness was ensured by credibility, dependability, transferability and confirmability. Ethical clearance to conduct the study was obtained from the University of Limpopo and from the Department Health and Social Development. The principles of informed consent, confidentiality and anonymity were observed during the study. Data were analyzed using the Tesch’s approach as described by Creswell (1994) cited in de Vos (2005:333).

Conclusions: The following themes emerged during data analysis: monitoring of foetal status during intrapartum, monitoring of the progress of labour during intrapartum, monitoring of the maternal status during intrapartum, and shortage of staff in the labour wards. Guidelines which aimed at improving midwifery care were formulated.

KEY WORDS

Utilization, partograph, monitoring, midwives, midwifery care, guidelines, foetal status, maternal status, labour, intrapartum, themes, shortage of staff.

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OPERATIONAL DEFINITIONS

Utilization Performing an action (South African Oxford School Dictionary, 2004:500). In this study utilization refers to plotting the partograph correctly and making appropriate decisions.

Partograph A graphical representation of the foetal and maternal progress of labour (Cronje & Grobler, 2003:77). In this study a partograph refers to the labour graph provided by the Limpopo Department of Health in the maternity case record.

Midwife A person who has undergone midwifery training and has the necessary skills to provide care, supervision and advice to women during pregnancy, labour, and delivery (Nolte, 2000:3). In terms of the Nursing Act of 2005 (Act No. 33 of 2005), “midwife” means a person registered as such in terms of Section 31 of the Nursing Act. In this study, midwife refers to a person trained to assess, monitor, analyze and interpret labour and conduct delivery of pregnant women.

Midwifery A service specifically aimed at assisting the individual, family and community to maintain, promote and restore health during the events surrounding childbirth by means of preventative, promotive, curative and rehabilitative healthcare (Nolte 2000: 3). In this study, midwifery refers to optimum midwifery care given to a pregnant woman in labour.

LIST OF ABBREVIATIONS

MOU	Midwifery obstetrics units
PMR	Perinatal mortality rate
PPIP	Perinatal Problem Identification Programme
SANC	South African Nursing Council
WHO	World Health Organization

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CHAPTER 1

OVERVIEW OF THE STUDY

1.1 Introduction and background

Globally, it is of paramount importance that all pregnant women in labour which is a physiological process characterized by an increase in myometrial activity resulting in cervical effacement and dilatation, followed by expelling the foetus from the uterus to the outside world be monitored by a midwife utilizing a partograph so that a live baby can be delivered without any complications (Ratchliffe, 2001:3, National Department of Health, 2000:34).

Neilson (2003:12) states that the partograph was started in Mexico by Dr Friedman in 1966 and brought into South Africa by Dr Philpot in 1970. Dangal (2007:2) and Cronje & Grobler (2003:76) explained the partograph as a graphical recording of the progress of labour and related conditions or parameters of the pregnant mother and foetus, displaying all observations made during the first stage of labour in a manner that will enable midwives and medical practitioners to analyze, interpret and recognize if the pregnant woman has moved into a high risk category to respond decisively to the identified problems.

The WHO (2007:1) describes the partograph as a tool for managing labour and it is a graphic representation of events of labour plotted against time in hours. WHO (2007:2) further indicates that the partograph consists of 3 parameters namely foetal

condition, maternal condition and the progress of labour, and can be used for monitoring labour in hospitals and health centers, and also at domiciliary level where trained midwives are practicing midwifery. According to the WHO (2007:2) the utilization of the partograph to monitor pregnant women in labour does not replace adequate screening of conditions that require immediate transfer of women on arrival to the labour ward. WHO (2007:4) further states the partograph is designed for early detection of abnormal progress of labour and the prevention of prolonged labour which would significantly reduce the risk of postpartum haemorrhage and sepsis and eliminate obstructed labour uterine rupture and its sequelae. According to WHO (2007:3), the purpose of utilizing the partograph to monitor pregnant women in labour is to reduce the maternal and perinatal morbidity and mortality rates worldwide, to improve the quality of care of pregnant women in labour and to increase the observation and interpretation skills of the midwives and medical personnel, to increase team work and ease the reference in teaching units and encourage timely referral from the periphery.

WHO(2007:4) asserts that the partograph is based on the following broad principles: the active phase of labour, which commences at 3 centimeters of cervical dilatation, and the latent phase of labour should not last longer than 8 hours. During the active phase of labour, cervical dilatation should not be slower than 1 cm per hour, a lag time of 4 hours between a slowing of labour, and the need for intervention is unlikely to compromise the foetus or the mother and avoids unnecessary intervention. Vaginal examination should be performed every 4 hours. The partograph shows the rate of cervical dilatation, descent of the head, duration, and frequency of uterine contractions and monitoring of vital signs.

A randomized study was conducted on 434 women in Mexico in 1966 to test for the effectiveness of the utilization of the partograph during labour using Friedman's partograph and a non-graphical descriptive chart. The women were randomized to either Friedman's partograph or a non-graphical descriptive chart. The study revealed that those who were not put on the partograph had more operative deliveries and more babies with low apgar scores at 5 minutes. Another study conducted in Karachi by Javed, Bhutta & Shoaib (2007:409) tested the role of the partograph in preventing prolonged labour. The objective of the study was to determine the effect of the partograph on the frequency of prolonged labour, augmentation of labour, operative deliveries and appropriate interventions based on the partograph to reduce maternal and perinatal complications. A case-controlled prospective and interventional study on 1000 women in labour was carried out in the obstetric units of Jinna Postgraduate Medical Centre, Karachi. Five hundred (500) women were studied before and after the introduction of the partograph. The results showed that there was a reduction in both the duration of labour and the number of augmented labour and vaginal examinations. It was concluded that by using the partograph to monitor pregnant women in labour reduced the frequency of prolonged labour, augmented labour, postpartum haemorrhage, ruptured uterus, puerperal sepsis and perinatal morbidity and mortality rates. The aim of the utilization of partograph is to empower midwives with plotting, analysis and interpretation skills when monitoring pregnant women in labour.

In the study conducted by Mohammad & Chongsuvivatwong (2005:3), it is stated that the partograph was introduced in Indonesia in 1998, and the new version of the World Health Organization (WHO) partograph was brought into Indonesia in 2000. The aim of the study was to assess the effectiveness of promoting the utilization of the

partograph by midwives caring for women in labour. Before the study, midwives did not utilize the partograph during the monitoring of pregnant women in labour because they complained that it had too many details to complete. The study revealed that education, training and supervision of the midwives resulted in a higher rate of the utilization of the partograph which reduced the number of vaginal examinations, augmented labour, poor apgar score at first minute, obstructed labour and increased referral.

Furthermore Lavendor, Alfirevic & Walkinshaw (2006:2-12) support that if progress of labour crossed the action line, a diagnosis of prolonged labour was made and managed according to protocol. The results of this study showed that the use of the 4 hour action line partograph improved the maternal and neonatal outcomes.

The utilization of partograph as a tool for intrapartum monitoring by midwives in sub-Saharan Africa is still a challenge, a notion supported by the study conducted in South West Nigeria by Fawole, Hunyinbo & Adekanie (2008:22) who found that a partograph is commonly not used to monitor Nigerian women in labour since knowledge about the partograph is poor. Furthermore, the authors concluded that the maternal mortality rate in Nigeria is a major public health issue and continues to rise since a partograph is not effectively used as a tool for monitoring labour. Hence, Dangal (2007:2) & Mathai (2009:256) also highlighted that the partograph as a tool serves as an initial warning system assisting in early decision on transfer actions and ongoing evaluation of the effect of midwifery interventions. Therefore, if utilized effectively, the partograph can reduce complications from prolonged labour which might be puerperal sepsis, uterine rupture, and postpartum haemorrhage. Nakkazi (2000:1) also maintains that the utilization of the partograph to monitor pregnant

women in labour saves the women's lives by ensuring that labour is closely monitored and life-threatening complications such as obstructed labour are identified and treated. However, despite the WHO recommendation, the partograph is still not widely used in Uganda and in other developing countries. Nakkazi (2000:1) further indicates that midwives often feel that completing the partograph is an additional time-consuming task, and they do not always understand how the utilization of the partograph to monitor pregnant women in labour can be life-saving.

Midwives in South Africa are also likely challenged in the utilization of the partograph as observed by the researcher and supported by Mathibe Neke (2006:1) who highlighted that midwives use the partograph incorrectly and inappropriately. Thus, some midwives take the partograph lightly as they plot the partograph when pregnant women who were in labour have already delivered. Midwives often argue that they do not have time to plot the partograph during the monitoring of pregnant women in labour. The National Department of Health (2000:34) further states that all midwives should utilize the partograph when monitoring pregnant women in labour so that problems identified during monitoring of labour can be attended to promptly by both the midwife and the attending doctor. Failure of midwives in utilizing the partograph correctly and appropriately when monitoring women during intrapartum constitute substandard care (Department of Health, 2000:34). This viewpoint is supported by Opiah (2001:1) who highlighted that a considerable number of pregnant women who suffer maternal complications are likely to be reduced significantly through utilization of a partograph to monitor women in labour.

The recording of assessment, observations and midwifery interventions as well as treatment, constitutes a legal record. It is, therefore, the midwife's professional

accountability and responsibility to keep accurate records of labour, delivery and the condition of the newborn (Searle, 2006:261). Failure of midwives to keep accurate records constitutes betrayal of the midwife-patient relationship (Searle, 2006:262). The South African Nursing Council (SANC, 1990:1-6) also states that a midwife who attends to the pregnant woman should be indicated in the maternity case record. Willful or negligent omission to keep accurate records of all actions performed on pregnant women in labour is considered as an omission and SANC can take disciplinary actions against that particular midwife (SANC, 1985:2).

Therefore, utilization of the partograph increases the analysis and interpretation skills of midwives, the monitoring of pregnant women in labour and thus aids in providing standardized foetal and maternal care, and accordingly improves midwifery care. Furthermore, Neilson (2003:12) states that the development of the partograph provides health professionals with a pictorial overview of the progress of labour. The utilization of the partograph to monitor labour allows prompt recognition of obstructed labour, maternal exhaustion and reduces incidences of prolonged labour, postpartum haemorrhage and labour requiring augmentation and caesarian section. The foetal and maternal outcome will consequently be improved with reduced perinatal and maternal morbidity and mortality rates (Mohammed, 2005:14).

In South Africa, the perinatal mortality rate related to intrapartum asphyxia has risen from 18% in 1999 to 20% in 2003, the high perinatal mortality had been correlated with failure of midwives to detect foetal distress and poor management of labour by the midwives (Pattison 2007:52). According to the Saving Mothers Report (2001:2) the maternal mortality ratio in South Africa is high at 150 per 100 000 deliveries compared to a mortality ratio in the United Kingdom of 11 per 100 000 deliveries.

The Limpopo Province in South Africa has a mortality ratio of 62 per 100 000 deliveries. However, 27% of maternal deaths in Limpopo Province occur as a result from postpartum haemorrhage and sepsis which are complications of lack or incorrect utilization of the partograph to monitor pregnant women in labour. The Saving Mothers Report (2006: 8) states that there were 281 maternal deaths in the 2002-2004 triennial period in the Limpopo Province and a total of 3406 deaths in South Africa during the 2005-2007 triennial period. Thus, the mortality rates in the Limpopo Province and in South Africa are rising. According to Farrel (2007:13), the PMR is also high and the leading cause of perinatal deaths in South Africa is intrapartum asphyxia and birth trauma. Farrel (2007:13) asserts that intrapartum asphyxia is the leading cause of stillbirths in South Africa. He further elaborates that 15% of perinatal deaths are avoidable because they are due to the inability of midwives to monitor foetal and maternal conditions, and the progress of labour with a partograph. Failure to utilize the partograph to monitor pregnant women in labour, and to analyze and interpret the findings depicted on the partograph, as well as the lack of addressing identified problems, can cause an unwanted increase in the maternal and perinatal morbidity and mortality rates (Farrel, 2007:14).

According to a study by Mulondo (2007:115) that reviewed maternity case records, it was found that midwives were incompetent in recording progress of labour and correct plotting of the partograph

The researcher observed from a Perinatal Problem Identification Programme (PPIP) of Lebowakgomo level 1 hospital that the perinatal mortality rate (PMR) is high. The PPIP data at Lebowakgomo also showed that intrapartum asphyxia resulted in 44% of the perinatal deaths. Therefore, the utilization of the partograph by midwives to

monitor pregnant women in labour may assist in the reduction of the perinatal and maternal mortality rates. Parameters of the partograph to be monitored will include foetal status, progress of labour and the maternal status.

Foetal status

The National Department of Health (2000:33) indicates that foetal status has to be assessed by auscultation of the foetal heart rate and checking the colour of amniotic fluid. The normal foetal heart rate ranges from 120 beats per minute (bpm) to 160 bpm without accelerations or decelerations. The foetal heart rate is auscultated every 2 hours in the latent phase of labour and half hourly in the active phase of labour. Tucker (2004:132) states that accelerations and decelerations should be excluded when monitoring pregnant women in labour. Accelerations are transient increases of the foetal heart rate above the normal baseline whereas decelerations are periodic decreases of the foetal heart rate to below normal baseline. He also categorizes decelerations as early, late, and variable. The nadir of the early deceleration synchronizes with the peak of the contraction due to compression of the foetal skull which leads to stimulation of the vagus nerve resulting in foetal bradycardia. Thus, the midwife should not panic when there are early decelerations since they are benign.

Olds (2004:140) notes that late decelerations are due to uteroplacental insufficiency and they occur as a result of a decrease in blood flow that impedes oxygen transfer to the foetus through the intervillous spaces. The nadir of the late deceleration occurs after the peak of the contraction and the foetus recovers after the contraction has ended. These events should, therefore, be plotted on the partograph, if they occur. The midwife should notify the doctor timeously as the situation may call for midwifery intervention. Tucker (2004:140) defines variable decelerations as visually

abrupt decreases in foetal heart rate from below the baseline. These variable decelerations occur due to cord compression which decreases the amount of blood supply to the foetus. Hence, it is imperative that the midwife should be able to analyze, interpret and intervene timeously to prevent complications that might arise.

When assessing the colour of the amniotic fluid, the midwife has to plot on the partograph whether the membranes are intact, amniotic fluid is clear or meconium stained (Department of Health, 2000:33). The presence of meconium in the amniotic fluid indicates an asphyxial insult to the foetus before or during labour (Olds, 2004:951). The physiologic response to asphyxia is increased intestinal peristalsis, relaxation of the anal sphincter and passage of meconium into the amniotic fluid. If this occurs during the monitoring of the pregnant woman in labour, the midwife should auscultate the foetal heart rate quarter hourly to exclude foetal distress.

Progress of labour

The progress of labour is assessed by performing a vaginal examination whereby cervical effacement, cervical dilatation, moulding and descent of the foetal skull are assessed. In the latent phase, the progress of labour is checked four hourly and two hourly during the active phase of labour, and findings thereof plotted on the partograph accordingly. Any deviations must be plotted and reported. The latent phase of labour is characterized by cervical effacement and cervical dilatation of 3 cm. This phase of labour lasts for 8 hours in a primigravida and 6 hours in a multipara. The progress of labour is assessed and plotted four 4 hourly in the latent phase of labour. The active phase of labour starts when the cervix is 4 cm dilated. Cervical dilatation occurs at a rate of one 1 cm/hour in a primigravida and 1.5 cm/hour in a multipara. Progress of labour is assessed and plotted two hourly in the

active phase of labour. Labour is divided into four stages, namely, first stage, second stage, third stage and fourth stage (Cronje & Grobler, 2003:75).

Cronje & Grobler (2003:77-78) & Nolte (2008:16) indicate that contractions are checked for strength, intensity, frequency and interval. The normal progress requires 3-4 uterine contractions per 10 minutes lasting for 45-60 seconds each. They further categorize uterine contractions that last forty 40 seconds as moderate and those that last for less than 20 seconds as mild. The midwife should plot the contractions on the partograph as mild, moderate, or strong, and deviations from normal should also be reported and plotted. In the latent phase of labour, uterine contractions are assessed and plotted 2 hourly, whereas they are assessed and plotted half hourly in the active phase of labour.

Maternal status

The maternal condition is observed on the partograph by assessing the maternal status of the pregnant woman in labour - this includes temperature, pulse, blood pressure and urinalysis. These observations are plotted 4 hourly during the latent phase of labour. Blood pressure and pulse are observed hourly in the active phase of labour (Nolte, 2000:169). Urinalysis is done 4 hourly in the latent phase of labour and 2 hourly in the active phase to exclude ketonuria, glycosuria, proteinuria and haematuria. According to Nolte (2000:169), pyrexia and tachycardia associated with oliguria and ketonuria indicate that the pregnant woman in labour has maternal exhaustion. This constitutes substandard midwifery care. Olds (2005:331) further states that hypertension associated with proteinuria shows that the pregnant woman has pregnancy-induced hypertension or renal disease, and has to be referred to a level three hospital for emergency management. Cronje & Grobler (2003:75) suggest that

intravenous infusions should not be used routinely in uncomplicated labour, but should be used when progress of labour takes over 4 to 6 hours, or when ketonuria is present. By contrast, the scope of practice of registered midwives requires that all pregnant women in labour should have an intravenous infusion of 1 litre dextrose saline in situ.

In this study, the researcher sought to explore and describe the utilization of the partograph by midwives in Lebowakgomo and Zebediela level 1 hospitals in the Capricorn District of the Limpopo Province.

1.2 Problem statement

The researcher has observed that midwives frequently do not utilize the partograph appropriately when monitoring pregnant women in labour by not plotting or incomplete plotting and not analyzing nor interpreting the findings. Thus, the researcher sought to explore and describe the utilization of the partograph by midwives when monitoring pregnant women in labour in Lebowakgomo and Zebediela level 1 hospitals in the Capricorn District of the Limpopo Province, South Africa.

1.3 Purpose of the study

The purpose of this study was to determine the utilization of the partograph by midwives when monitoring pregnant women in labour in the labour wards of Lebowakgomo and Zebediela level 1 hospitals in the Capricorn District of the Limpopo Province, South Africa.

1.4 Research question

The research question asked was, “what skills and knowledge do midwives have on the utilization of partograph for monitoring pregnant women in labour in Lebowakgomo and Zebediela level 1 hospitals in the Capricorn District of the Limpopo Province, South Africa?”.

1.5 Objectives of the study

In light of the problem statement and identified research question, the objectives the study were to:

- explore and describe the utilization of the partograph by midwives when monitoring labour in Lebowakgomo and Zebediela level 1 hospitals in the Capricorn District of the Limpopo Province.
- develop guidelines that would assist midwives to effectively utilize the partograph to monitor pregnant women in labour hence provision of quality midwifery care in Lebowakgomo and Zebediela level 1 hospitals of the Capricorn District of the Limpopo Province.

1.6 Significance of the study

This study has special significance for assisting midwives in Lebowakgomo and Zebediela level 1 hospitals in the correct and appropriate utilization of the partograph to monitor labour in order to reduce the maternal and perinatal morbidity and mortality rates in the Limpopo Province.

1.7 Research methodology

1.7.1 Research design and method

A qualitative, explorative and descriptive research design that is contextual in nature was used to explore and describe the utilization of the partograph by midwives in Lebowakgomo and

Zebediela level 1 hospitals of the Capricorn District of the Limpopo Province. The research design method, setting, sampling and methods of data collection are detailed in Chapter 2.

1.7.2 Population

The study population included all midwives currently registered with the SANC and practising in the Lebowakgomo and Zebediela level 1 hospitals in the Capricorn District of the Limpopo Province (Tereblanche, Durrheim & Painter, 2006:133; Nkatini, 2006:38).

1.7.3 Method of data collection: Semi-structured in-depth interviews

Semi structures in-depth interviews with a guide were used to collect data (Chapter 2).

1.7.4 Data analysis

Data analysis is a process of bringing order, structure and meaning to the mass of data collected (de Vos et al, 2005:333). Tesch's method of open coding as described by Creswell (1994:155), cited in de Vos et al (2005:333) was used to analyze the data.

1.7.5 Measures to ensure trustworthiness

Trustworthiness was ensured by credibility, transferability, dependability and confirmability (Babbie & Mouton, 2001:277; de Vos et al, 2005:346).

1.8 Ethical considerations

The researcher obtained ethical clearance from the University of Limpopo Research Ethics Committee and also from the Department of Health and Social Development of the Limpopo Province. Permission to conduct the research was obtained from the Chief Executive Officers of the respective hospitals. The principles of informed consent, confidentiality and anonymity had been observed during the study. For more details, refer to the annexures.

1.9 Dissemination of information

Research reports and articles will be written and submitted to accredited research journals. This will facilitate access to the information (Gerish & Lacey, 2006:447). Research papers emanating from this work will also be presented at seminars and conferences.

1.10 Limitations of the study

The findings of the study can not be generalized because the research was conducted in only two hospitals (i.e., Lebowakgomo and Zebediela) in the Capricorn District, Limpopo Province (Newell & Burnurd 2006:109).

1.11 Conclusions

Chapter 1 provided an introduction and background to the study, discussed key concepts, elucidated the problem statement, the purpose of the study, the objectives and research question, and expounded the significance of the study. A broad description of the research methodology used for data collection, and the limitations and dissemination of information, was also given in this chapter. Chapter 2 contains comprehensive information on the research methodology used.

CHAPTER 2

RESEARCH METHODOLOGY

2.1 Introduction

This chapter discusses the research design, setting, population and sampling techniques, inclusion criteria and methods of data collection used in this study. The method of data analysis, ethical considerations and measures to ensure trustworthiness will also be outlined in this chapter.

2.2 Research design and method

A qualitative, explorative, descriptive research design that is contextual was used to explore and describe the utilization of the partograph by midwives in Lebowakgomo and Zebediela level 1 hospitals of the Capricorn District of the Limpopo Province. The study was explorative as it enabled the researcher to familiarize herself with and gain insight into the utilization of the partograph by midwives as they monitor pregnant women in labour (Babbie, 2007:88; Burns & Grove, 2003:43). This study was descriptive as the researcher described the utilization of the partograph by midwives in Lebowakgomo and Zebediela level 1 hospitals in the Capricorn District of the Limpopo Province. Babbie (2007:89) conceptualizes a descriptive research design as one in which the researcher first observes and then describes what was observed. This study was contextual as it was conducted within the context of the use of the partograph in labour wards at the aforementioned sites. A thick and detailed description of the utilization of the partograph by midwives to monitor pregnant women in labour was provided with selected quotations, anecdotes and comments from the midwives who participated in this study. Terreblanche, Durrheim & Painter (2006:47) state that as researchers want to make sense of feelings, experiences, social situations or phenomena as

they occur in the real world, they would want to study such events in their natural settings. Babbie (2007:272) describes the contextual research method as the understanding of events within a concrete, natural context in which they occur.

2.3 Research setting

The study was conducted in the labour wards of Lebowakgomo and Zebediela level 1 hospitals, situated in the Lepelle Nkumpi Municipality in the Capricorn District of the Limpopo Province, South Africa. Lebowakgomo hospital is located about 48 km South of Polokwane, the capital city and administrative seat of the Limpopo Province. Lebowakgomo hospital is situated in a semi-urban area while Zebediela hospital is situated in a deep-rural area, 65 km from Polokwane. The two hospitals were chosen because they are level 1 hospitals where many deliveries are conducted by midwives.

2.4 Population and sampling

2.4.1 Population

A population is the theoretically specified aggregation of study elements from which the sample is actually selected (Tereblanche, Durrheim & Painter, 2006:133, Nkatini, 2006:38; Babbie 2007: 190). In this study, the population consisted of all midwives currently registered with the SANC and who practised in the Lebowakgomo and Zebediela level 1 hospitals.

2.4.2 Sampling

A non-probability purposive sampling technique was used to obtain the sample size of 15 participants. The researcher selected the midwives who worked in the labour wards and currently registered as practising midwives with the SANC, and who were willing to participate in the research. Six (6) participants were drawn from Zebediela hospital and 9

from Lebowakgomo hospital. Sampling was continued until data saturation was reached. Sampling is a process of selecting observations (Babbie, 2007:184; Brink, 2006:133).

2.4.3 Inclusion criteria

Only participants currently registered with the SANC and who practised as midwives were recruited to the study. They were working in the labour wards of Lebowakgomo and Zebediela level 1 hospitals.

2.5 Method of data collection: Semi-structured in-depth interviews

The researcher first made appointments with the unit managers and participants at Lebowakgomo and Zebediela level 1 hospitals. The purpose of the study was explained in order to establish a trusting relationship with the participants. Semi-structured in-depth interviews with a guide were used to collect data from the participants with the aim of determining the utilization of the partograph to monitor pregnant women in labour. The interviews were conducted in a private room, away from noise and disruptions. Open-ended questions that enabled the participants to speak freely were used during the interviews that lasted for 30 to 45 minutes. A tape recorder was used to capture all the information in order to save the full record of the interviews. The researcher also took field notes in order to retain the process of the interview (de Vos et al, 2006:298; Babbie, 2007:309). The interviews were conducted until data saturation was reached (de Vos et al, 2005:292). Babbie (2007:267) states that probing is a technique employed in interviewing to solicit a more complete answer to a question whereby a non-directive phrase is used to encourage a respondent to elaborate on an answer. Thus, probing was used to obtain clarity of critical issues during the interviews.

2.6 Data analysis

Data analysis is a process of bringing order, structure and meaning to the mass of data collected (de Vos et al, 2005:333). Tesch's method of open coding was used to analyze data (Creswell, 1994:155 cited in de Vos et al, 2005:333). The researcher listened to the tape recorder and read the field notes and transcripts several times in order to gain a sense of the interviews. The researcher randomly chose one transcript, read it, and wrote down the ideas as they came to mind. The previous step was repeated for all transcripts. Similar topics were then clustered together in order to identify major topics, unique topics and leftovers. Descriptive words were used for topics and these were combined into categories. Data belonging to each category were assembled separately and re-coded. Themes and categories were developed until data were saturated (de Vos et al, 2005:337).

2.7 Ethical considerations

2.7.1 Preparation for data collection

Ethical clearance was obtained from the University of Limpopo Research Ethics Committee and also from the Polokwane - Mankweng Research Ethics Committee to conduct the study. Permission was granted by the Limpopo Provincial Department of Health and Social Development Research Committee to conduct the study at Lebowakgomo and Zebediela level 1 hospitals in the Capricorn District of the Limpopo Province. Permission to conduct the study was also obtained from the Chief Executive Officers of Lebowakgomo and Zebediela level 1 hospitals.

2.7.2 Informed consent

The purpose of the study was explained to the participants to obtain their informed consent. The subjects were informed that participation was voluntary and that they had the right to withdraw without victimization if they did not wish to continue with the study. The

researcher requested the participants' permission to use a tape recorder and also to take notes that enabled her to log the complete information for retrieval and analysis.

2.7.3 Confidentiality and anonymity

Confidentiality and anonymity was ensured by using numbers on the tape recorder and on the field notes instead of the names of the participants. Raw data were not made available to people outside the research study. The researcher protected the identity and the privacy of the participants through the use of quotations to ensure that no connection was made between the data and the participants (Gerish & Lacey, 2006:36; Brink, 2006:41; Nkatini, 2006:36).

2.8 Measures to ensure trustworthiness

Trustworthiness was ensured by credibility, transferability, dependability and confirmability (Babbie & Mouton 2001:276).

2.8.1 Credibility

Credibility refers to the compatibility between the constructed realities that exist in the minds of the participants and those that are attributed to them (Babbie & Mouton, 2001:277). In this study, credibility was ensured by prolonged engagement with the participants. The researcher stayed at the sites until saturation of data was reached. The semi structured in-depth interviews were tape recorded and field notes were taken.

2.8.2 Transferability

Babbie & Mouton (2001:277) refer to transferability as the extent to which the findings can be reproduced in the same context, but with other participants. Transferability was ensured by providing a thick description of the methodology and by using purposive sampling.

2.8.3 Dependability

Babbie & Mouton (2001:277) state that dependability implies to the evidence that if the study was to be repeated with similar participants in the same context, its findings would be the same. Dependability was ensured by giving a dense description of the research method used in this study.

2.8.4 Confirmability

Confirmability refers to the degree to which the findings are a product of the focus of the inquiry and not the biases of the researcher (Babbie & Mouton, 2001:277). In this study, confirmability was ensured by the availability of the raw data, tape recorder and the field notes.

2.9 Conclusions

This chapter outlined the research methodology that was followed during data collection, and included details of the research setting, the population sampling, and methods of data analysis and trustworthiness.

CHAPTER 3

RESULTS AND DISCUSSION

3.1 Introduction

This chapter discusses the findings of the study. The themes and categories that emerged during data analysis with regard to the utilization of the partograph to monitor pregnant women in labour are summarized in Table 1.

3.2 Data presentation

The semi-structured interview guide that was used in this study encompassed two sections, viz., the demographical data of the participants and the narrative data of the participants (Annexure D). Figure 1 shows the years of experience the participants indicated with regard to their utilization of the partograph to monitor labour.

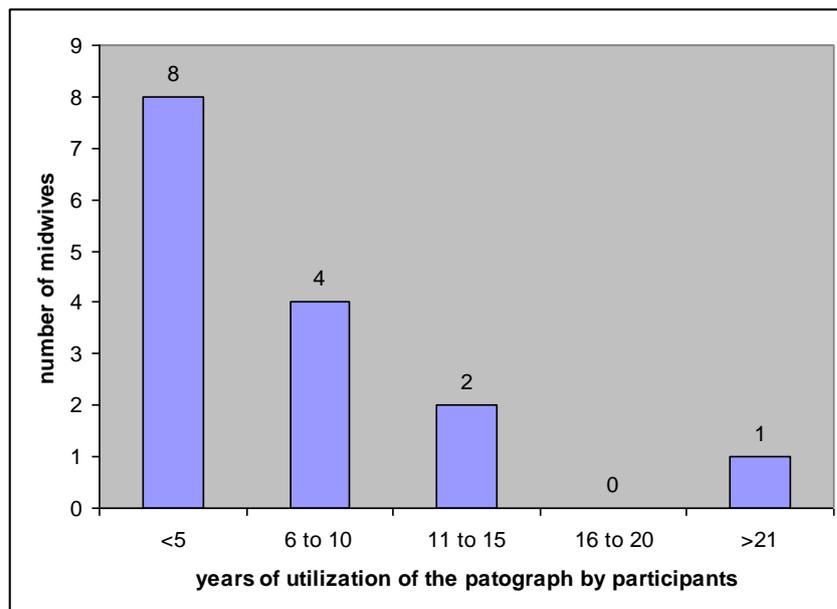


Figure 1. Years of utilization of the partograph by participants.

Table 1. Themes and categories on the utilization of the partograph

Themes	Categories
1. Monitoring and plotting of foetal status during the intrapartum phase	1.1 Failure of plotting foetal status during the latent phase of labour 1.2 Incorrect plotting of foetal status during the active phase of labour
2. Monitoring and documenting the progress of labour during the intrapartum phase	2.1 Failure of monitoring and documenting the progress of labour during the latent phase 2.2 Lack of knowledge of participants regarding monitoring and documenting the active phase of progress of labour 2.3 Failure to analyze and interpret the partograph during the progress of labour
3. Monitoring and plotting maternal status during the intrapartum phase	3.1 Incorrect plotting of maternal status during the latent phase of labour 3.2 Incorrect plotting of maternal status during the active phase of labour 3.3 Failure to identify, analyze and interpret maternal status on the partograph
4. Lack of human resources to monitor pregnant women in labour	4.1 Shortage of staff in the labour wards

Figure 1 shows that 8 participants had utilized the partograph for less than 5 years, 4 used the partograph for 6-10 years, while 2 utilized the partograph for 11-15 years. None of participant utilized the partograph for 16-21 years, but 1 participant had utilized the partograph for >21 years. The data revealed that participants who utilized the partograph for 11-15 years and for more than 21 years were able to correctly assess pregnant women in labour according to the protocol and plot on the partograph. However, 2 of the participants who utilized the partograph for 6-10 years experienced difficulties in monitoring foetal and maternal status, and thus failed to analyze the results depicted on the partograph when compared with participants who had utilized the partograph for less than 5 years.

3.3 Themes and categories that emerged during data analysis

3.3.1 Theme 1: Monitoring and plotting of foetal status during the intrapartum phase

3.3.1.1 Failure of plotting foetal status the during latent phase of labour

This study found that most of the participants monitored foetal heart rate correctly during the latent phase of labour. This was indicated as follows: *“I will monitor the foetal heart rate two hourly in the latent phase of labour”*. A few participants indicated that: *“I will monitor the foetal heart rate hourly in the latent phase of labour”* The National Department of Health (2007:36) advocates that foetal heart rate should be monitored 2 hourly in the latent phase of labour. Adherence to this protocol is important as it would assist these participants to identify problems such as intrapartum asphyxia and act upon them early to prevent neonatal deaths. Some participants did not plot the foetal status correctly during the latent phase of labour: *“I will monitor the foetal heart rate four hourly in the latent phase of labour.”* Failure of the participants to monitor and plot the foetal heart rate two hourly in the latent phase of labour exposes the foetus to intrapartum asphyxia and possibility of the woman delivering a stillborn. Armstrong (2008:1) presented a case study whereby a primigravida was admitted in the latent phase of labour being 1-2 cm dilated and the foetal heart rate was 144 bpm at 23:15. The foetal heart rate was checked 3 hours after the woman in labour was admitted to the labour ward. When the foetal heart rate was assessed it was found that the pregnant woman in labour had late decelerations, but the midwife did not summon medical aid, hence the woman in labour delivered a fresh stillborn baby. Nolte (2008:19) elaborates that the foetal heart rate should be assessed intermittently by means of a pinard stethoscope or Doppler device and it should be assessed before, during and after a contraction. Bhungani ka Mzolo (2002:34) reported that a number of midwives appeared before the professional conduct committee of SANC for misconducts and the charges against these midwives were that they neglected to monitor the foetal heart rate, failed to assess, diagnose, and refer to the medical practitioner when the pregnant women in labour changed condition.

3.3.1.2 Incorrect plotting of foetal status during the active phase of labour

The National Department of Health (2007:36) requires that the foetal heart rate be monitored half hourly in the active phase of labour. Nolte (2008:20) also states that the foetal heart rate should be assessed and recorded on the partograph every 30 minutes during the active phase of labour. The observations of this study indicated that most participants were monitored and plotted the foetal status correctly during the active phase of labour, as exemplified by the following statement: *“I will monitor and plot the foetal heart rate half hourly during the active phase of labour.”* These participants were able to diagnose problems such as foetal distress due to intrapartum hypoxia as they assessed the foetal heart rate as frequently as required by the protocol from the Department of Health and Social Development. According to Tucker (2004:161), the frequency of assessment of the foetal heart rate should be guided by the risk status of both the woman in labour and the foetus. If both the mother and the foetus are classified as high risk, the foetal heart rate should be checked half hourly.

However, this study also noted that some participants monitored and plotted foetal status incorrectly during the active phase of labour: *I will monitor and plot the foetal heart rate hourly during the active phase of labour.”* These participants would certainly fail to spot problems like foetal distress that may occur during monitoring of foetal status, and this could lead to fresh stillbirths and babies born with low apgar scores.

Armstrong (2008:1), in the case study he conducted, emphasizes the importance of monitoring foetal heart rate frequently during the active phase of labour. In the case study, foetal heart rate was checked every 2 hours in the active phase of labour. Armstrong found that the protocol of monitoring foetal heart rate half hourly in the active phase of labour was not followed and, therefore, the midwife could not diagnose foetal distress that occurred due to infrequent monitoring of foetal heart rate, and hence the baby was a fresh stillborn.

A study conducted by Pettersson, Svensson & Christensson (2000:86) found that problems are still experienced with the monitoring of foetal status because when they correlated the

Apgar score of newborn babies with their heart rates plotted during labour, babies with low apgar scores had normal foetal hearts during labour, and they concluded that midwives were just plotting the foetal heart rate without monitoring.

The analysis of the current study further revealed that a few participants indicated that: *“I will perform a vaginal examination during labour to detect the colour of amniotic fluid, caput, and moulding and will notify the doctor if there is meconium in the amniotic fluid”*. These participants would be able to identify severe moulding and meconium stained amniotic fluid, and thus prevent intrapartum asphyxia leading to low apgar scores during labour. The state of the amniotic fluid should be recorded whether the membranes are intact, clear or meconium stained (Nolte, 2008:21). According to Petterson et al (2000:86), the condition of the amniotic fluid is an important indicator for early detection of foetal asphyxia. Nolte (2008: 21), Gabbe (2002:368) and Groeschel & Glover (2001:24) further specify that moulding is an indication of how well the maternal pelvis can accommodate the foetal head. Groeschel & Glover (2001:24) states that caput succedaneum is often present during labour, but it is of no significance during the progress of labour. Thus, the midwife should not panic if it occurs during the monitoring of women in labour.

3.3.2 Theme 2: Monitoring and documenting the progress of labour during the intrapartum phase

3.3.2.1 Failure of monitoring and documenting the progress of labour during the latent phase

This study revealed that the majority of participants did not monitor or document the latent phase of labour. They, therefore, missed problems that might have occurred during the latent phase of labour such as a prolonged latent phase. This failure of documenting of findings of progress of labour during the latent phase would make it difficult for the participants to decide on appropriate actions or interventions concerning labour. This was supported by the following response: *“I will start to document the findings of progress of labour on the*

partograph when the cervix is three (3) centimeters dilated because I will be sure then that the pregnant woman is in true labour and also that she would not cross action line quickly.”

These findings therefore indicate gross unprofessional conduct during the progress of labour.

In the study conducted by Mohammad & Chongsuvivatwong (2005:4) it was observed that midwives had received training on the utilization of the partograph, but were not documenting findings because they complained that it had too many details to complete. The authors further acknowledged that monitoring and documenting of findings of progress of labour during the latent phase of labour was important to judge whether the latent phase of labour was prolonged or not.

According to Petterson et al (2000:87), all the pregnant women in their study arrived in the hospitals while they were in the active phase of labour and, as a result, the latent phase of labour was not utilized except for transfer of original data to the alert line of the partograph. In the case study conducted by Armstrong (2008:12) it was noted that monitoring and documenting of the latent phase of the progress of labour remained a big challenge to the midwives. In the case study, a pregnant woman in labour was admitted to the labour ward at 23h15 with a cervical dilatation of 1-2 cm, but she was put on the partograph for the first time at 02h00 when her cervical dilatation was 5 cm. In countries like Australia, women in labour are put on the partograph only during active phase of labour (Groeschel & Glover (2001:26). In South Africa, the National Department of Health (2000:34) requires that the partograph be started when the pregnant woman in labour has true signs of labour. These signs include painful uterine contractions accompanied by at least cervical effacement, cervical dilatation, rupture of membranes and show.

This study revealed that only few participants were monitoring the latent phase of labour correctly and were able to diagnose problems that could occur during this phase and were thus able to act upon them without delay: *“I will start to plot on the partograph when the woman in labour has true signs of labour. These signs are show, uterine contractions, cervical*

effacement, and cervical dilatation and the latent phase of labour should not exceed eight (8) hours". These findings are in agreement with reports by Management Sciences for Health, (2007:1) and the National Department of Health (2000:31) that the partograph should be started when the woman shows true signs of labour.

3.3.2.2 Lack of knowledge of participants regarding monitoring and documenting active phase of the progress of labour.

The majority of participants had a good understanding of the progress of labour and were able to examine women in labour according to the powers, the passage and the passenger during poor progress of labour. It is important that active phase of labour be monitored so as to assess if there is progress in the labour process and to detect problems promptly. These responses illustrate this point:

"The pregnant woman in labour will not be progressing well if she crossed the action line of the partograph and the presenting part does not descent with each contraction."

"Progress of labour is determined by progressive cervical dilatation, further descent of the presenting part and good uterine contractions. If there is a problem with any of these then there will be poor progress of labour."

These observations indicate that participants had knowledge of the progress of labour and they would be able to examine the pregnant woman in labour looking at the powers, the passage, the passenger, and the patient (woman in labour) to identify the cause of the poor progress of labour and notify the doctor early.

Some participants, however, have shown that they did not know progress of labour with regards to the cervical dilatation:

"I expect the cervix of a primigravida to dilate at a rate of one centimeter two (2) hourly while the cervix of a multipara is to dilate at a rate of two (2) centimeters two (2) hourly."

“I expect the cervix to dilate at a rate of one (1) centimeter per hour regardless of whether it is of a primigravida or of a multipara.”

Based on these responses such participants would provide substandard midwifery care and thus put the pregnant woman in labour at risk of postpartum haemorrhage and puerperal sepsis. It is likely that these participants would continue to monitor progress of labour until it might be too late as this would be normal to them.

The WHO (2008:1) corroborates that in poor progress of labour, the cervical dilatation is to the right of the alert line on the partograph. This means that in poor progress of labour the patient will cross the action line of the partograph. According to Cronje & Grobler (2003:308), when there is poor progress of labour, the woman should be assessed looking at the woman in labour herself, the powers, the passenger and the passage to diagnose the cause of the poor progress of labour.

3.3.2.3 Failure to analyze and interpret the partograph during the progress of labour

This study showed that the majority of participants lacked skills to analyze and interpret findings documented on the partograph. This places the woman in labour at risk of prolonged labour which may lead to intrapartum asphyxia, postpartum haemorrhage and sepsis (Cronje & Grobler 2003:303). Participants elaborated as follows:

“The partograph becomes a problem when you were not the one who had started it because we plot differently other midwives plot at three (3) centimeters others at four (4) centimeters, when the woman crosses the action line, and I call the doctor who prescribes further monitoring I feel I cannot continue with that partograph as I take it that it is spoiled. I therefore write notes until the woman in labour has delivered.”

“There are misunderstandings around the partograph as some midwives repeatedly plot four (4) centimeters without notifying the doctor.”

“If I find a partograph that I feel that the cervical dilatation and descent are not plotted correctly or is spoiled I will put in a new sheet of the partograph and start plotting my findings.”

“I was taught at school to start the partograph at three (3) centimeters of cervical dilatation so I will start to plot at three centimeter of cervical dilatation”

“I will progress the woman in labour even when she has crossed action line without referring her.”

According to Pettersson, Svensson & Christenson (2000:86), midwives neglected to transfer pregnant woman in labour to the next level of care because they had inadequate knowledge of how to interpret the partograph. Mulondo (2007:145), in a study of 30 maternity case records, found that midwives were incompetent with regard to the interpretation of the partograph.

3.3.3 Theme 3: Monitoring and plotting maternal status during the intrapartum phase

3.3.3.1 Incorrect plotting of maternal status during the latent phase of labour

This study found that an equal number of participants were able to plot the maternal status of women in labour correctly. This indicated that with maternal observations of the vital signs (temperature, blood pressure and pulse) and urine output they would be able to identify problems such as pre-eclampsia, haemorrhage, anaemia, infections and malaria and they would be thus able to act upon them early. This was borne out by the following response: *“I will monitor and plot the vital signs four (4) hourly in the latent phase of labour.”*

The importance of plotting the maternal status cannot be over-emphasized because this forms the baseline data with regard to the progress of labour. The Department of Health (2007:33) maintains that blood pressure and pulse rate be assessed and plotted 4 hourly in the latent

phase of labour and urinalysis concomitantly. Nolte, (2000:136) indicates that during labour the blood is emptied from the uterus into the maternal vascular system resulting in increased cardiac output during the first and second stage of labour. The blood flow to the uterine artery is directed to the peripheral vessels causing a rise in the blood pressure and pulse rate. Nolte (2000:136) further states that the respiratory rate of the pregnant woman in labour also rises due to increased physical activity and increased oxygen consumption. The urine output must be monitored and each sample of urine must be tested for glucose, ketones, proteins and blood (Nolte 2000:147).

This study also revealed that some participants were unable to plot the maternal status of the woman in labour correctly. As such, they were providing substandard midwifery care with regard to the maternal status because they were not competent to diagnose problems related to the recording of vital signs and urine output: *“I will monitor the vital signs once during the latent phase of labour.”*

Armstrong (2008:1) in his case study shows the extent of the problem of lack of monitoring of maternal observations by midwives. In the case study, maternal observations were made 4 hours after the pregnant woman was admitted to the labour ward, but the midwife only took temperature and blood pressure. Armstrong (2008:3) further states that maternal observations are important to adequately assess the progress of labour and often one without the other becomes useless. Groeschel & Glover (2001:24), too, affirm that maternal observations such as temperature, pulse and blood pressure should be documented on the partograph. Urine output and analysis should also be documented as it is important to maintain an empty bladder during labour. According to Groeschel & Glover (2001:24), in clinical practice, maternal status is rarely documented on the partograph during monitoring of the pregnant woman in labour. Mulondo (2007:119) cautions that lack of skills in taking and recording blood pressure correctly by midwives during labour will result in an unnoticed hypertension leading to pre-eclampsia, which will cause insufficient foetal circulation and poor foetal growth. He noted further that increased blood pressure will lead to placental insufficiency which results in

foetal distress and, if not detected and acted upon early, culminates in the birth of a baby with a low apgar score.

3.3.3.2 Incorrect plotting of maternal status during the active phase of labour

Data analysis of the observations in this study revealed that some participants were monitoring the maternal status incorrectly during the active phase of labour: *“I will monitor the vital signs two hourly in active phase of labour”*.

Another participant added that: *“I will monitor the vital signs six hourly in the active phase of labour unless the blood pressure was high then I would monitor it half hourly*. These responses indicated that participants were not monitoring the maternal status as required by the National Department of Health (2000:33), i.e., that blood pressure should be monitored and plotted hourly and the pulse rate checked and plotted half hourly in the active phase of labour. These participants were, for that reason, providing substandard monitoring of the maternal status and they would be unable to diagnose maternal problems until it might be too late. In a study conducted by Delvaux,(2007:2) on 229 women, it was found that blood pressure was measured in less than half of the women and the partograph was completed in only 5% of the women in labour.

The findings of this study did also show that some participants were monitoring the maternal status correctly during the active phase of labour: *“I will monitor and plot vital signs hourly in the active phase of labour.”* Accordingly, they would be proficient in identifying problems that may occur with vital signs such as elevated blood pressure, tachycardia and would be able to refer the woman in labour timeously.

3.3.3.3 Failure to identify, analyze and interpret maternal status on the partograph

The findings of this study indicated that most participants lacked knowledge about identifying and diagnosing maternal exhaustion on the partograph:

“I will keep on monitoring the woman in labour even if she sweats profusely, hyperventilates, has haematuria, and when she asks for water frequently.”

“The woman in labour will be confused; have swollen eyes and also difficulty in breathing.”

“The woman in labour will be anxious and will start to bargain and her blood pressure will be elevated.”

“The woman in labour will have halitosis and I will see from her face that she is really tired with cessation of contractions, Bandl’s ring, dry lips, fetal distress, bradycardia and general body weakness”.

These responses implied that the majority of the participants would be unable to notice signs of maternal exhaustion that could lead to prolonged labour. These observations are consistent with those of Ithembu (2006:31) that midwives do not know the signs of maternal exhaustion and they also overlook the monitoring of the maternal status. According to Cronje & Grobler (2003:259) maternal exhaustion occurs as a result of prolonged labour and poor management of labour, such as inadequate sedation and the lack of kilojoule intake may aggravate the situation. Woman in labour should have adequate fluid and kilojoule intake to prevent maternal exhaustion (Nolte, 2008:34).

Few participants demonstrated knowledge regarding the detection of maternal exhaustion on the partograph. As such, they would be able to prevent maternal exhaustion by inserting an intravenous infusion of 5 % dextrose. This was indicated by the following quotation: *“The pregnant woman in labour with maternal exhaustion will have tachycardia, hyperthermia and*

oliguria and ketonuria on urine testing and other signs such as anxiety, acetone smells from her mouth can be written in the progress notes as they cannot be plotted on the partograph.” Pyrexia and tachycardia associated with oliguria and ketonuria indicate that the pregnant woman in labour has maternal exhaustion (Nolte, 2000:169). Moreover, hypertension associated with proteinuria shows that the woman in labour has pregnancy-induced hypertension or renal disease and should be referred to a level 3 hospital for emergency management (Olds, 2005:331).

3.3.4 Theme 4: Lack of human resources to monitor pregnant women in labour

3.3.4.1 Shortage of staff in the labour wards

All the participants indicated that a shortage of staff affects the utilization of the partograph and may result in incorrect monitoring pregnant of women in labour.

This sentiment was verbalized variously as follows:

“The problem is that most of the time we are only two midwives in a shift and when one midwife goes off in the afternoon, I will be expected to monitor all the women in the labour ward until the next shift comes in.”

“You find that I am the only midwife in the labour ward for the afternoon and when I experience a problem with the woman that I am monitoring I leave her with the assistant nurse to call a doctor in the postnatal as we do not have a phone in the labour ward. This becomes a problem because anything might happen to that pregnant woman in labour while I am still out of the unit.”

“It is difficult to monitor all these women in labour being two midwives in the unit. Sometimes I even think of not coming to work if one of us has social problems or was ill.”

“I cannot monitor four or five women in labour being alone; some of them will be mismanaged.”

“The problem is that if one woman delivers and complicates I will have to spend more time on that complicated delivery and will miss monitoring the other women on due time.”

“Most of the clinics are not conducting deliveries and other women do not like to deliver at the clinics so most of them come to Lebowakgomo level one hospital so this creates a big shortage of staff as we are monitoring women who were supposed to go to the clinics.”

Maputle (2005:50) affirms that due to a shortage of midwives it is not easy to spent quality time with mothers and to verify their preferences. According to Thopola (2002:36), midwives expressed exhaustion, general body pains and insomnia because they are short staffed. Mafalo (2003:39) also states that the shortage of nurses in South Africa impacts negatively on the delivery healthcare services in the country. He further draws attention to the fact that the shortage of nurses is caused by a global flow of nurses to richer countries and that the population of South Africa grows faster than the population of nurses produced in the country. Mafalo (2003:39) added that many nurses are also dying of human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) in this country and this also affects the human resources negatively. The population of South Africa grows by 14% a year while the nursing profession by 10%, and this results in a gradual shortage of fully qualified nursing staff. An estimated 13,496 nurses work in developed countries (Dolamo, 2009:31). The former Minister of Health, Barbra Hogan, indicated that she was aware of the fact that nurses were moving to developed countries, that the private sector is paying nurses more than the public sector, and that there was a need to stem this situation, hence the introduction of occupational specific dispensation (Dolamo 2009:33).

Shortage of staff also makes nurses to overwork themselves and this resulted in tiredness and job dissatisfaction (Bimenyimana, 2009:5). Some nurses become discouraged and even absent themselves from work as a sign of protest against the situation they found themselves in. This

situation further decreases the already overstretched number of staff causing more stress and anxiety to those on duty.

The Department of Health (2000:12) published a list of high risk pregnant women who are supposed to attend antenatal clinic and deliver at the hospital. These high risk group includes: elderly primigravida (age of 35 years), women with a history of previous uterine operations, postpartum haemorrhage and neonatal deaths, women with preexisting medical conditions such as asthma, diabetes mellitus, tuberculosis, heart diseases, thyroid abnormalities, and hypertension in pregnancy. This means that all the pregnant women who do not fall within the high risk group should deliver at the clinics and at the midwifery obstetric units (MOU). The introduction of free health care services made it possible for the community to move in and out of the health facilities (Nemathaga, 2005:59). It appears that the public have misconceptions and myths regarding the implementation of free health services, such myths include that clients could move from one clinic to another at the same time without problems. According to the findings of this study, the influx of women in labour to hospitals made it difficult for the participants to monitor them as they would be too many for the midwives to monitor their labour using the partograph. Women in labour are still expected to deliver at clinics despite the fact that National Department of Health (2007:13) advocates that deliveries should occur in hospitals and midwifery obstetrics units (MOU), whereas clinics are to conduct emergency deliveries. The Constitution of the Republic of South Africa (Act no. 108 of 1996) Chapter 2 (the Bill of Rights) states that everyone has the right to have access to healthcare services, including reproductive healthcare. The state must take reasonable legislative and other measures within its available resources to achieve the progressive realization of this right.

3.4 Conclusions

In this chapter, data were presented and analyzed utilizing Tesch's approach as described in de Vos et al (2005:333). The demographic data of the participants regarding their experience

on the utilization of the partograph was also described. The results of the study showed that participants were not monitoring foetal status during the latent and active phases of labour. Most participants in this study lacked knowledge regarding the progress of labour and skills to analyze the results depicted on a partograph. The study also identified that shortages of human resources in the labour wards made it difficult to monitor all women in labour using the partograph. The study revealed that participants failed to correctly diagnose maternal status during labour. Chapter 4 will discuss guidelines for monitoring and plotting of the partograph.

CHAPTER 4

GUIDELINES FOR UTILIZATION OF THE PARTOGRAPH BY MIDWIVES TO MONITOR LABOUR

4.1 Introduction

This chapter presents guidelines for monitoring and plotting of the partograph, based on the themes and categories that emerged from data analysis.

4.2 Guidelines for utilization of the partograph to monitor labour

The study revealed that midwives experienced challenges on the utilization of the partograph. Therefore, in-service education programme must be initiated and implemented. The in-service education programme should emphasize:

Guideline 1

Accurate assessment and appropriate monitoring and plotting of the foetal and maternal statuses two hourly in the latent phase of labour and half hourly in the active phase of labour. Progress of labour is assessed and monitored four hourly in the latent phase of labour and two hourly in the active phase of labour.

Guideline 2

Empowering midwives to develop plotting, analysis and interpretation skills on the partograph.

Guideline 3

Strengthening of maternal morbidity and mortality rates meetings both at institution and provincial to identify misconducts that occurred during the management of low and high risk pregnant women in labour and learn from them.

Guideline 4

Initiation and implementations of peer evaluation on the effective utilization of the partograph in Lebowakgomo and Zebediela Level one hospitals to monitor low risk and high risk pregnant women in labour.

Guideline 5

The correct utilization of the partograph should form part of the performance areas of all managers and midwives in the labour wards of Lebowakgomo and Zebediela level one hospitals.

Guideline 6

The Provincial Department of Health of Limpopo should ensure the following:

Supports visits are done continuously to the hospitals to audit them on the utilization of the partograph.

District managers should continuously strengthen services provided for pregnant women in clinics to assist reducing the number of patients delivering at the hospitals.

Draw up clear policies indicating whether pregnant women are still expected to deliver at the clinics or not.

Guideline 7

Supervision in the labour wards should be done by experienced and advanced midwives to support newly qualified midwives on the utilization of the partograph.

Guideline 8

The public in particular the pregnant women should be informed and assured about services at the clinics through health education during antenatal care and also through the media.

Guideline 9

Formulation of referral criteria for high risk pregnant women from home, clinics and level one hospitals to level two hospitals by responsible stake holders from clinics and hospitals.

Guideline 10

The following midwifery interventions should be implemented for quality midwifery care in the labour wards of Lebowakgomo and Zebediela level one hospitals:

Pelvic assessments should be done to exclude cephalopelvic disproportion.

The bladder of the pregnant women in labour should be kept empty at all times to prevent complications that may occur as a result of a full bladder.

Pregnant women in labour should be given sedatives to relieve pain

4.3 Conclusions

This chapter dealt with guidelines which were formulated in order to assist midwives to provide quality midwifery care during the utilization of the partograph to monitor women in labour. The guidelines were developed according to the themes and categories that emerged from the data analysis.

CHAPTER 5

LIMITATIONS, RECOMMENDATIONS AND CONCLUSIONS

5.1 Introduction

This chapter discusses the extent to which the objectives of the study have been achieved, the limitations and the recommendations of the study.

5.2 Summary of the findings

The purpose of this study was to determine the utilization of the partograph for monitoring labour by midwives in Lebowakgomo and Zebediela level 1 hospitals.

The objectives of the study were to:

- explore and describe the utilization of the partograph by to monitor labour in Lebowakgomo and Zebediela level 1 hospitals of the Capricorn District of the Limpopo Province.
- develop guidelines that will assist midwives to effectively utilize the partograph to monitor labour hence provision of quality midwifery care in the above healthcare facilities.

5.3 Significance of the study

The significance of this study was to formulate guidelines that would assist midwives in the Lebowakgomo and Zebediela level 1 hospitals to utilize the partograph correctly and

appropriately in order to reduce the high maternal and perinatal morbidity and mortality rates in the Limpopo Province.

5.4 Research design and method

A qualitative, explorative, descriptive research design that is contextual was used to explore and describe the utilization of the partograph by midwives in Lebowakgomo and Zebediela level 1 hospitals of the Capricorn District of the Limpopo Province. The study was explorative as it enabled the researcher to familiarize herself with and gain insight into the utilization of the partograph by midwives as they monitor pregnant women in labour (Babbie, 2007:88). This study was contextual as it was conducted within the context of labour wards in the Limpopo Province. A thick and detailed description of the utilization of the partograph by midwives to monitor pregnant women in labour was presented with selected and direct quotations, anecdotes and comments from the midwives. This approach was in line with the notions of Terreblanche, Durrheim & Painter (2006:47) and Babbie (2007:272) that if researchers want to make sense of feelings, experiences, or social situations as they occur in the real world, they would study such phenomena in their natural settings.

5.5 Data analysis

Data was analyzed using Tesch' approach as described by Creswell (1994:124) and cited in de Vos (2005:334). The themes and categories that emerged were as follows:

Theme 1: Monitoring and plotting of foetal status during the intrapartum phase

The narrative data of the participants revealed that participants were failing to monitor and plot foetal status correctly during the latent phase of labour. This was shown when participants elaborated that they would monitor and plot foetal heart rate 4 hourly during the latent phase of labour. This posed a problem as participants would miss problems like foetal distress. The Department of Health (2007:36) outlined that foetal heart rate should be monitored two 2 hourly during the latent phase of labour. Some participants indicated that

they would monitor and plot foetal heart rate hourly during the active phase of labour. The Department of Health (2007:36) stated that the foetal heart rate should be monitored ½ hourly during the active phase of labour.

Theme 2: Monitoring and documenting the progress of labour during the intrapartum phase

The study showed that most participants were failing to monitor and plot the latent phase of the progress of labour. This could expose the woman in labour to prolonged labour and lead to postpartum haemorrhage and postpartum sepsis. Some participants lacked knowledge of progress of labour in terms of cervical dilatation. This was deduced when participants indicated that the cervix of a primigravida is to dilate at a rate of 1 cm 2 hourly while that of a multipara is to dilate at a rate of 2 cm 2 hourly. This caused problems as the pregnant women in labour would have prolonged labour without participants noticing that labour was prolonged. Some participants lacked skills to analyze and interpret results depicted on the partograph. This was evidenced when participants indicated that when the woman in labour had crossed action line they would rather start a new partograph or write notes than to continue with the partograph that they were using as they considered it spoiled.

Theme 3: Monitoring and plotting maternal status during the intrapartum phase

The findings in this study have shown that the participants were monitoring and plotting the maternal status incorrectly during the latent and active phases of labour. This was inferred when participants elaborated that they would monitor and plot the maternal status 4 and 6 hourly during the latent phase. The study further revealed that participants failed to diagnose maternal exhaustion using the partograph.

Theme 4: Lack of human resources to monitor pregnant women in labour

Findings in this study revealed a challenge of staff shortages in labour wards which made it difficult for the participants to provide quality midwifery care through the utilization of the partograph.

5.6 Recommendations

5.6.1 Recommendations to midwifery practice

Several recommendations emanated from the study. In terms of midwifery practice in-service education programmes should be developed and implemented to advance midwives' skills in monitoring, plotting, analyzing and interpreting of foetal, maternal statuses and progress of labour correctly and appropriately during the intrapartum phase as explicitly stipulated by SANC who are registered or enrolled under the Nursing Act no 33 of 2005 (no R2598) and the regulation relating to the conditions under which registered midwives and enrolled midwives may carry on their Profession (R2488) as well as Guidelines for maternity care in South Africa.

- Introduction and implementation of a drawn comprehensive in-service programme in labour wards for utilization of the partograph to eliminate the challenges of not utilizing it by the midwives.
- Promoting monitoring through continuity of formal in-service to the midwives regarding the utilization of the partograph.
- Encouraging the midwives to utilize the partograph as are they obliged to render quality midwifery care.

Upgrading the skills of the midwives pertaining analyzing and interpretation of the partograph in order to reduce the high morbidity and mortality rates.

- The employer should create a culture of valuing continuing support of midwives.

6.5.2 Recommendations for further research

- Staffing norms should be established and adequate staff should be hired to overcome shortages of staff in the labour ward.
- Research should be conducted to establish what causes the influx of women in labour to the hospitals.
- A research should be conducted to find out if the tutors are teaching the correct midwifery skills to student midwives in the training institutions.

5.7 Limitations of the study

The findings of this study could not be generalized to other hospitals because they were limited to two hospitals in the Capricorn District of the Limpopo Province.

5.8 Conclusions

This chapter appraised the purpose and the objectives of the study and whether they have been met. The limitations of the study have been highlighted and recommendations were made based on the findings of the study. The recommendations of this study can be implemented in basic midwifery education and in-service education for midwives, as they provide quality midwifery care for both the mother and baby.

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ANNEXURE A

Letter to the Provincial Department of Health and Social Development

PERMISION TO CONDUCT A RESEARCH PROJECT

I am a nursing master's student at the University of Limpopo and hereby requesting permission to conduct a research project at Lebowakgomo and Zebediela Hospitals in the Capricorn District. The title of my study is: the utilization of the partograph by midwives in Lebowakgomo and Zebediela hospitals in the Capricorn District of the Limpopo province. Data collection will be planned in such a way that it does not disturb the daily running of the institutions..

Thanking you in anticipation

Yours truly

Shokane Morogwana Anna

ANNEXURE B

Ethics Committee Clearance Certificate



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH AND SOCIAL DEVELOPMENT

ETHICS COMMITTEE
CLEARANCE CERTIFICATE
UNIVERSITY OF LIMPOPO
Polokwane/Mankweng Hospital Complex



PROJECT NUMBER: 046/2008

TITLE: The Utilization of Partograph by midwives in Lebowagkomo and Zabeliela Hospitals in the Capricorn District in Limpopo Province

RESEARCHER: Shokane Morogwana Anna

ALL PARTICIPANTS: N/A

Department of Nursing
School of Health Care Sciences, University of Limpopo

Supervisor: Mrs. K. Thopolani
Co supervisor: Mrs N.M. Jali

Date considered: 25.11.2008

Decision of Committee: Recommended for Approval

Date: 26.11.2008


Prof. A.J. Mbokazi

Chairman of Pietersburg Mankweng
Hospital Complex Ethics Committee

Note: The budget for research has to be considered separately. Ethics Committee is not providing any funds for projects.

ANNEXURE C

Letter to the Chief Executive Officers of Lebowakgomo and Zebediela Hospitals

PERMISION TO CONDUCT A RESEARCH PROJECT

I am a nursing master's student at the University of Limpopo and hereby requesting permission to conduct a research project in your hospital. The title of the research is: the utilization of the partograph by midwives in Lebowakgomo and Zebediela hospitals of the Capricorn District in the Limpopo Province, South Africa. The study will assist the midwives to utilize the partograph effectively and thus the foetal and maternal mortality in the Limpopo Province will be reduced.

Thanking you in anticipation

Yours truly

Morogwana Anna Shokane

ANNEXURE D

Questionnaire

SECTION A: DEMOGRAPHICAL DETAILS

YEARS OF EXPERIENCE IN MIDWIFERY

1	2	3	4	5
<5	6-10	11-15	16-20	>21

QUALIFICATION IN MIDWIFERY

1	2	3	4
Diploma in Midwifery	Diploma in Nursing	Bachelor of Nursing Sciences	Advanced Diploma in Midwifery and Neonatal Nursing Science

SECTION B: TOPIC GUIDE

1. How often do you assess the foetal condition during labour?

.....

.....

.....

.....

2. When would you begin to plot the partograph during labour? Why?

.....

.....

.....

.....

3. How would you identify if the pregnant woman is not progressing well during labour?

.....
.....
.....
.....

4. You find a woman in labour and feel that the findings on her partograph do not tally with your findings what do you do in order to have a record of your findings?

.....
.....
.....
.....

5. How would you diagnose maternal exhaustion on the partograph during monitoring of pregnant women in labour

.....
.....
.....
.....

6. Do you think shortage of staff affects the monitoring of women in the labour wards if yes how if no how?

.....
.....
.....
.....

ANNEXURE E

University of Limpopo Research Ethics Committee Application Form

<p>APPLICATION FORM FOR PROPOSED RESEARCH PROJECT UNIVERSITY OF LIMPOPO MEDUNSA CAMPUS RESEARCH ETHICS COMMITTEE</p>	
--	---

A. PARTICULARS OF APPLICANT/CHIEF RESEARCHER

Title: Mrs. **First name:** Morogwana Anna. **Surname:** Shokane

Department: Nursing **Tel:** 0716036867/ 015 632 6900 ext 1081

School: Health Care Sciences

B. DETAILS OF RESEARCH PROJECT

(Tick appropriate block(s) with a 'x')

1.a New project or : Continuation of project

1.b Independent research : or : Contract research:

Post-graduate research: or : Undergraduate research :

Degree (specify): Master Curationis

At which university is the degree registered? University of Limpopo -
Turfloop Campus

2.a. Title of project: The utilization of the partograph by midwives in
Lebowakgomo and Zebediela level 1 hospitals of the Capricorn District in the
Limpopo Province, South Africa

Name	Department/Institution	Signature

--	--	--

c. **Research Co-ordinator (In the case of independent or contract research)**

Name	Department/Institution	Signature

d. **Supervisor (In the case of post-graduate research)**

Name	Department/Institution	Signature
<u>Mrs M K Thopola</u>	<u>Nursing</u>	

e. **Co-supervisor (In the case of post-graduate research)**

Name	Department/Institution	Signature
Mrs M N Jali	Nursing	

f. **Hospital Superintendent/Health Care Manager**

Name	Department/Institution	Signature

g. **Other involved departmental heads**

Name	Department/Institution	Signature

C. SPECIAL REQUIREMENTS

Will the research involve the following:

	Yes	No		Yes	No
Experimental animals		x	Approval from Animal ethics Committee attached (separate application form required)		
Special apparatus		x	Is it available at Medunsa?		
Special drugs (medicaments)		x	Explanation of who will supply the drugs attached		

Radio isotopes		x	Completed radio Isotopes form attached (Appendix 4)		
Special laboratory facilities		x	Is it available at Medunsa? If no, attach a statement of requirements		
Electron microscopy		x	Completed Electron microscope form attached (Appendix 3)		
Health care services	x		Signature of health care manager attached		
Statistical analysis		x	Has a statistician been consulted? If yes, attach form. (Appendix 2) If no explain.		

D. ETHICAL ISSUES

1. Indemnity

If a hospital (human, dental or veterinary) will be involved, please attach the written approval of the Superintendent. Should the use of the service laboratories be required, attached a letter of consent of the hospital management that this is in order.

2. Consent

Will patients/human volunteers form part of the experiment/trial/survey? If so, kindly modify the attached form, specifically for your project. (Appendix 1)

E. BUDGET

Who will finance this project? (Tick appropriate block with a “x”)

University of Limpopo (Medunsa Campus)		Health Department		Self	x	Other (specify)

Please indicate the institutions where application has been made for financial support or where it is intended to apply for financial support.

MRC		NRF		CSD		Other (specify)

NB: Approval of the research project does NOT imply that the requested funds will be made available to the applicant.

G. DECLARATION BY RESEARCHER(S)

Should this project be approved, I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research. I/we guarantee to ensure compliance with these approved conditions. Furthermore, I/we undertake not to change the procedure as detailed in the protocol but will submit a further application to the Research Committee if changes become necessary

SIGNATURE: _____ DATE: _____
CHIEF RESEARCHER:

SIGNATURE: _____ DATE: _____

HEAD OF DEPARTMENT

SIGNATURE: _____ DATE: _____
DIRECTOR OF SCHOOL

ANNEXURE F

University of Limpopo (Medunsa Campus) Consent Form

UNIVERSITY OF LIMPOPO (Medunsa Campus) CONSENT FORM

Statement concerning participation in a Clinical Trial/Research Project*.

Name of Project / Study / Trial*

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

I have read the information on */heard the aims and objectives of* the proposed study and was provided the opportunity to ask questions and given adequate time to rethink the issue. The aim and objectives of the study are sufficiently clear to me. I have not been pressurized to participate in any way.

I understand that participation in this Clinical Trial / Study / Project* is completely voluntary and that I may withdraw from it at any time and without supplying reasons. This will have no influence on the regular treatment that holds for my condition neither will it influence the care that I receive from my regular doctor.

I know that this Trial / Study / Project* has been approved by the Research, Ethics and Publications Committee of Faculty of Medicine, University of Limpopo (Medunsa Campus) / Dr George Mukhari Hospital. I am fully aware that the results of this results of this Trial / Study / Project* will be used for scientific purposes and may be published. I agree to this, provided my privacy is guaranteed.

I hereby give consent to participate in this Trial / Study / Project*.

.....
Name of patient/volunteer

.....
Signature of patient or guardian.

.....
Place

.....
Date

.....
Witness

Statement by the Researcher

I provided verbal and/or written* information regarding this Trial / Study / Project*
I agree to answer any future questions concerning the Trial / Study / Project* as best
as I am able.
I will adhere to the approved protocol.

.....
Name of Researcher **Signature** **Date** **Place**

*Delete whatever is not applicable.

ANNEXURE G

Letter from Statistician

STATISTICAL ANALYSES

**The Chairperson,
Medunsa Campus Research Ethics Committee
Box 163
UNIVERSITY OF LIMPOPO
Medunsa Campus**

Dear Sir/Madam

STATISTICAL ANALYSES

I have studied the research protocol of

titled:

_____ **and**

I agree/do not agree * to assist with the statistical analyses.

Yours sincerely,

Signature: Statistician

Name in block letters

Date

*Please delete which is not applicable. If you do not agree to assist with the statistical analyses, please provide reasons on a separate sheet.

ANNEXURE H

Letter from Language Editor



FACULTY OF NATURAL SCIENCES
DEPARTMENT OF MEDICAL BIOSCIENCES



Donavon C. Hiss, PhD (Medicine)
University of the Western Cape
Private Bag X17
Bellville 7535
South Africa

Tel: +27 (0) 21 959 2334
Fax: +27 (0) 21 959 1563
E-mail: dhiss@uwc.ac.za

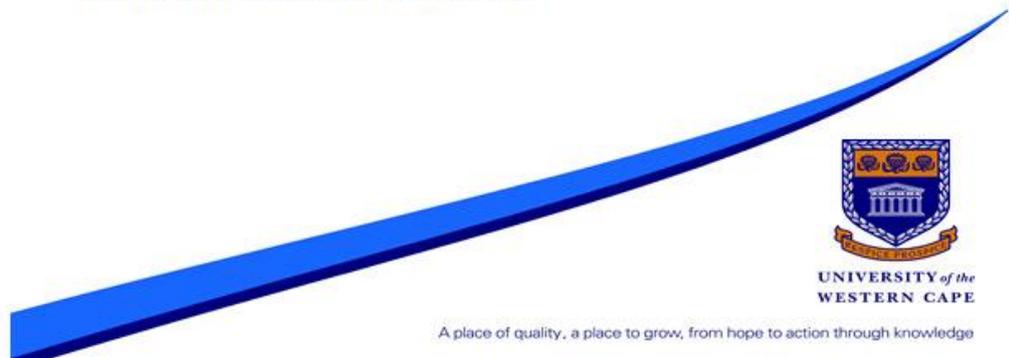
25 October 2010

To Whom it May Concern

This serves to confirm that I have edited the language, spelling, grammar and style of the MCur Mini-Dissertation by Morogwana Anna Shokane: "The Utilization of the Partograph by Midwives in Lebowakgomo and Zebediela Level One Hospitals in the Capricorn District of the Limpopo Province, South Africa".

Sincerely Yours

Donavon C. Hiss
Ph.D. (Medicine), Dip. Freelance Journalism, Dip. Creative Writing



**UNIVERSITY of the
WESTERN CAPE**

A place of quality, a place to grow, from hope to action through knowledge