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**THE NON-PHARMACOLOGIC METHODS OF PAIN
MANAGEMENT USED BY MIDWIVES DURING THE FIRST
STAGE OF LABOR**

M.M. MORU

**THE NON-PHARMACOLOGIC METHODS OF PAIN
MANAGEMENT USED BY MIDWIVES DURING THE FIRST
STAGE OF LABOR**

BY

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**Submitted in accordance with the partial requirements
for the degree**

MASTERS SOCIETATIS SCIENTIAE IN NURSING

**In the faculty of Health Sciences, School of Nursing at
the University of the Free State**

NOVEMBER 2002

SUPERVISOR: DR L. ROETS

Universiteit van die
Oranje-Vrystaat
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DEDICATION

I WOULD LIKE TO DEDICATE THIS DISSERTATION TO MY HUSBAND, SAMSON AND MY CHILDREN FOR ENDLESS PATIENCE, UNDERSTANDING, LOVE, SUPPORT AND CONFIDENCE THEY GAVE ME DURING THE DIFFICULT TIMES OF MY STUDY AND TO THE REST OF MY FAMILY OF WHOM THEY ARE TOO MANY TO MENTION.

"I, Mmasechaba Moleboheng Moru, declare that the dissertation hereby submitted by me for the Masters Social Science (Nursing) degree at the University of the Free State is my own independent work and has not previously been submitted by me at another university/faculty. I furthermore cede copyright of the dissertation in favour of the University of the Free State".

Mmasechaba Moleboheng Moru

ACKNOWLEDGEMENTS

My sincere appreciation and thanks to:

- **God, the Almighty for the timeless strength and mercy which He offered me daily during the entire period of the study.**
- **The Government of Lesotho for the financial assistance they provided me to make this project a dream come true.**
- **The Director General of Health Services, Lesotho and the Deputy Executive Secretary of the Christian Health Association of Lesotho who granted me permission to carry out this study in their hospitals.**
- **All the midwives who kindly participated in the study for devoting their time in completing the questionnaires and mailing them back to me.**
- **All my colleagues and friends for their support by sparing their time with me and also for giving advise.**
- **Mrs. Riëtte Nel for making inputs towards the study and assisting with data analysis.**

- **Mrs. Rina Botha for taking care of proof reading and editing the language for the study.**
- **Mrs. Pam Botha for taking care of the typing of this research study.**
- **Blandinah, Mpho and Mamoliko for endless encouragement and valid contributions, not forgetting emotional and psychological support they provided.**
- **The Expert Committee of the School of Nursing for their constructive comments and guidance.**
- **My special thanks and gratitude to my study leader, Dr. Lizeth Roets for guidance, encouragement, support, compassion, contributions and endless patience throughout my academic time.**

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION AND PROBLEM FORMULATION	PAGE
1.1 Introduction and problem statement	1
1.2 Aim and objectives	2
1.2.1 The aim of the study	3
1.2.2 The objectives of the study	3
1.3 Conceptual framework and definitions	3
1.3.1 The conceptual framework	4
1.3.2 Definitions	4
1.4 Research design	6
1.5 Research techniques	6
1.6 Population	6
1.7 Pilot study	7
1.8 Data collection	7
1.9 Validity and reliability	8
1.10 Ethical issues	8
1.11 Data analysis	8
1.12 The value of the study	9
1.13 Outline of the study	9
1.14 Conclusion	10

CHAPTER TWO

THE USE OF NON-PHARMACOLOGIC METHODS OF PAIN MANAGEMENT DURING THE FIRST STAGE OF LABOR PAGE

2.1	Introduction	11
2.2.	Definition of non-pharmacologic methods of pain management	12
2.3	Physiology of labor pain	13
2.3.1	Causes of pain during the first stage of labor	13
2.3.2	Theories that explain the concept of pain	14
2.3.2.1	<i>The gate control theory</i>	14
2.3.2.2	<i>The endogenous biochemical pain control theory</i>	15
2.4	Factors that influence the use of non-pharmacologic methods of pain management by the midwives during the first stage of labor	16
2.5	Non-pharmacologic methods of pain management	20
2.5.1	Childbirth preparation	21
2.5.2	Meeting the mother for the first time	21
2.5.3	The midwife-mother ratio	22
2.5.4	The environment	23
2.5.5	The birth plan	24
2.5.6	Labor support	25
2.5.7	Positioning and mobility	26
2.5.8	Vocalisation	27
2.5.9	The application of heat or cold	27
2.5.9.1	<i>Hydrotherapy</i>	28
2.5.9.2	<i>Touch and massage</i>	29
2.5.10	Breathing techniques	30
2.5.11	Mental stimulation techniques	31
2.5.11.1	<i>Imagery/visualization</i>	31
2.5.11.2	<i>Meditation</i>	32

	PAGE
2.5.11.3 <i>Music</i>	33
2.5.11.4 <i>Hypnosis</i>	33
2.5.12 Transcutaneous electrical nerve stimulation (TENS)	34
2.6 Comfort measures	34
2.7 Measures to promote the use of non-pharmacologic methods of pain management by the midwives during the first stage of labor	35
2.8 Conclusion	38

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction	39
3.2 The research design	39
3.3 Research techniques	39
3.3.1 Literature review	39
3.3.2 Questionnaire	40
3.3.3 Sampling	40
3.4 Validity and reliability	41
3.4.1 Validity	41
3.4.2 Reliability	42
3.5 Data collection	43
3.6 Ethical considerations taken into account	43
3.7 Data analysis	44
3.8 Problems encountered during data collection	44
3.9 Conclusion	45

CHAPTER FOUR

DATA ANALYSIS		PAGE
4.1	Introduction	46
4.2	Data reduction	46
4.3	The exposition of data obtained from the questionnaires completed by the midwives	46
4.3.1	The results of the biographic data obtained from the respondents Section A	47
4.3.1.1	<i>The midwives' ages</i>	47
4.3.1.2	<i>Children that the midwives have</i>	47
4.3.1.3	<i>The highest professional qualification in midwifery</i>	49
4.3.1.4	<i>The type of institution where the highest midwifery qualification was obtained</i>	50
4.3.1.5	<i>The place of work</i>	51
4.3.1.6	<i>The midwives' years of midwifery experience</i>	52
4.3.2	The results of the content analysis of the use of non-pharmacologic methods of pain management by the midwives during the first stage of labor (Section B)	53
4.3.2.1	<i>Meeting the mother for the first time</i>	53
4.3.2.2	<i>Policy pertaining to pain management</i>	54
4.3.2.3	<i>The midwife-mother ratio</i>	55
4.3.2.4	<i>Addressing the mother</i>	56
4.3.2.5	<i>Place of rendering care to mothers</i>	57
4.3.2.6	<i>The average length of time with the mother</i>	57
4.3.2.7	<i>Discussing with the mother her previous birth experience(s)</i>	58
4.3.2.8	<i>Discussing the mother's birth plan</i>	59
4.3.2.9	<i>Reasons for not discussing birth plans</i>	60

	PAGE
4.3.2.10 <i>Methods used to assess the mother's needs for pain relief</i>	62
4.3.2.11 <i>Discussing non-pharmacologic methods of pain management with the mothers</i>	63
4.3.2.12 <i>Allowing the mother to choose the methods of pain management</i>	65
4.3.2.13 <i>Allowing the mother to have support persons</i>	66
4.3.2.14 <i>Assisting the support person</i>	67
4.3.2.15 <i>Reasons for not allowing support persons</i>	68
4.3.2.16 <i>Positions the midwife prefers</i>	69
4.3.2.17 <i>The person assisting the mother to adopt different positions</i>	71
4.3.2.18 <i>Allowing the mother to freely make noises</i>	72
4.3.2.19 <i>Methods of applying heat to the mother's body</i>	74
4.3.2.20 <i>Massage techniques used by midwives</i>	75
4.3.2.21 <i>Using concentrated oils in conjunction with massage</i> ...	76
4.3.2.22 <i>The use of reassuring touch</i>	76
4.3.2.23 <i>Breathing techniques</i>	77
4.3.2.24 <i>Mental stimulation techniques</i>	78
4.3.2.25 <i>The use of transcutaneous electric nerve stimulation (TENS)</i>	78
4.3.2.26 <i>Education on non-pharmacologic methods of pain management</i>	80
4.3.3 <i>Comfort measures</i>	81
4.3.4 <i>Comments</i>	83
4.4 <i>Conclusion</i>	83

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS	PAGE
5.1 Introduction	85
5.2 Conclusions and recommendations	85
5.2.1 The age of the midwives and the number of children the midwives have: conclusion, implication for practice and recommendation ...	85
5.2.2 Education: conclusion, implication for practice and recommendation	86
5.2.3 The years of midwifery experience: conclusion, implication for practice and recommendation	87
5.2.4 Meeting the mother for the first time: conclusion, implication for practice and recommendation	88
5.2.5 Policy pertaining to pain management: conclusion, implication for practice and recommendation	89
5.2.6 The midwife-mother ratio: conclusion, implication for practice and recommendation	90
5.2.7 The place of rendering care to mothers: conclusion, implication for practice and recommendation	91
5.2.8 The average length of time spent with the mother: conclusion, implication for practice and recommendation	92
5.2.9 Discussing the mother's previous birth experiences and birth plans: conclusion, implication for practice and recommendation	93
5.2.10 Methods used to assess the mother's needs for pain relief: conclusion, implication for practice and recommendation	94
5.2.11 Non-pharmacologic methods of pain management: conclusion, implication for practice and recommendation	95
5.2.12 Comfort measures: conclusion, implication for practice and recommendation	96
5.3 Limitations	97

	PAGE
5.4 Conclusion	97
Summary	98
Opsomming	100
Bibliography	102

TABLES

Table 4.1	Age distribution of the respondents	47
Table 4.2	The number of children the midwives have	48
Table 4.3	Meeting the mother for the first time	54
Table 4.4.	The midwife: mother ratio	56
Table 4.5	Addressing the mother	56
Table 4.6	The place of rendering care	57
Table 4.7	The average length of time spent with the mother during the first stage of labor	58
Table 4.8	Reasons for not discussing the birth plan	61
Table 4.9	Allowing the mother to choose the methods of pain management	66
Table 4.10	The person who assists the mother to adopt different positions ...	72
Table 4.11	Methods of applying heat to the mother's body	75
Table 4.12	Massage techniques used by midwives during the first stage of labor	76
Table 4.13	Education on non-pharmacologic methods of pain management	81
Table 4.14	Comfort measures used by midwives during the first stage of labor	82

FIGURES

Figure 4.1	Children that the midwives have	48
Figure 4.2	The highest professional qualification in midwifery	50
Figure 4.3	The type of institution where the highest qualification was obtained	51
Figure 4.4	The place of work	52
Figure 4.5	The years of midwifery experience	53
Figure 4.6	Policy pertaining to pain management	55
Figure 4.7	Discussing the mother's previous birth experiences	59
Figure 4.8	Discussing the mother's birth plan	60
Figure 4.9	The methods used by midwives to assess the mother' need for pain relief	63
Figure 4.10	Discussing non-pharmacologic methods of pain management with the mothers	64
Figure 4.11	Allowing the mother to have support persons	67
Figure 4.12	Reasons for not allowing support persons	68
Figure 4.13	Positions that midwives prefer mothers to adopt during the first stage of labor	70
Figure 4.14	Allowing the mothers to freely make noises	73
Figure 4.15	Methods of applying heat to the mother's body	74
Figure 4.16	The use of reassuring touch	77
Figure 4.17	The use of mental stimulation technique	78
Figure 4.18	The use of TENS	80

ANNEXURES

Annexure A	Questionnaire for midwives regarding the use of non-pharmacologic methods of pain management during the first stage of labor	110
Annexure B	The letter of permission granted by the Ethics Committee of the Faculty of Health Sciences of the University of the Free State ...	118
Annexure C	The letter to request permission from the Ministry of Health and Social Welfare, Lesotho	119
Annexure D	The letter to request permission from the Christian Health Association of Lesotho (CHAL)	120
Annexure E	Letter of permission from the Ministry of Health and Social Welfare, Lesotho	121
Annexure F	Letter of permission from CHAL	122

CHAPTER ONE

1.1 INTRODUCTION AND PROBLEM STATEMENT

One unique aspect of labour is its association with pain and discomfort. Even though pain as a concept may be difficult to describe for the individual who feels it, what remains is that pain hurts (Lowe, 1996:82). Pain is whatever the experiencing person says it is, and it exists whenever that person says it does. This implies that each individual is the best judge of her pain and that pain should not be discounted by others (Nichol and Zwelling, 1997:825; Youngstrom, Baken and Miller, 1996:351).

Pain experienced during labor is probably the most painful event in the lives of women. (McCrea and Wright 1999:878). This kind of pain is not a simple reflection of the physiologic processes of labor and childbirth. Instead, it is the result of a complex and subjective interaction of multiple physiologic, psychosocial and cultural factors on a woman's individual interpretation of labour stimuli (Lowe, 1996:82; Simkin, 1995:161).

The pain experienced during labor, especially during the first stage, adversely affects both the woman and the fetus, resulting in fetal hypoxia and asphyxia, which may lead to brain damage and death of the fetus (Olds, London and Ladewig, 1996:674). Strategies of controlling pain without harm to the women, the fetus or labor progress remains a major focus in maternity care (Simkin, 1995:161).

Nichol and Zwelling (1997:857) contend that many of the non-pharmacologic methods of pain relief, for example massage and assisting a mother to adopt a comfortable position during labor, relate closely to many common nursing

comfort and support strategies. They do not require a physician's order and should be used as a first step in the midwife's intervention to help the women manage pain during labor.

Non-pharmacologic pain interventions represent a wide repertoire of methods that can be used during labor by a women, her support persons, and in most cases, independently by the midwife (Lowe, 1996: 85). The public also appears to have great confidence in the midwife's ability in this areas (Lawler, 1997: 5).

Some non pharmacologic methods of pain management may be potentially as effective as narcotics in providing adequate pain relief to a well supported mother who experiences a reasonably normal labor (Simkin, 1995: 161; Gagnon & Waghorn, 1996: 4). However, these methods have been woefully neglected by midwives, who apparently spend only a small percentage of their time providing supportive care to mothers in labor (Gagnon & Waghorn, 1996: 4; Nichol & Zwelling, 1997: 859).

Although there are some researchers who have examined some areas of labor pain, there is still a scarcity of literature dealing with the use of non-pharmacologic methods of pain management and support by midwives during labor. Little is written on the exploration and evaluation of the use of these methods and midwives have a tendency to focus attention on pharmacologic methods of pain management (Moore, 1997: IX). Therefore additional research is needed since there is ample opportunity for midwives to use these methods and discover the best modifications for their use during labor, as they are the caregivers who attend to mothers throughout the entire childbirth process (Moore, 1997: 43; Nichol & Zwelling, 1997: 834).

1.2 AIM AND OBJECTIVES

1.2.1 Aim

The purpose of this study is to determine the use of non-pharmacologic methods of pain management by midwives during the first stage of labor.

1.2.2 Objectives

- To identify non-pharmacologic methods of pain management used by midwives during the first stage of labor.
- To identify the factors that influences the use of non-pharmacologic methods of pain management by midwives during the first stage of labor.
- To make recommendations on the use of non-pharmacologic methods of pain management by midwives during the first stage of labor.

1.3 CONCEPTUAL FRAMEWORK AND DEFINITIONS

1.3.1 Conceptual framework

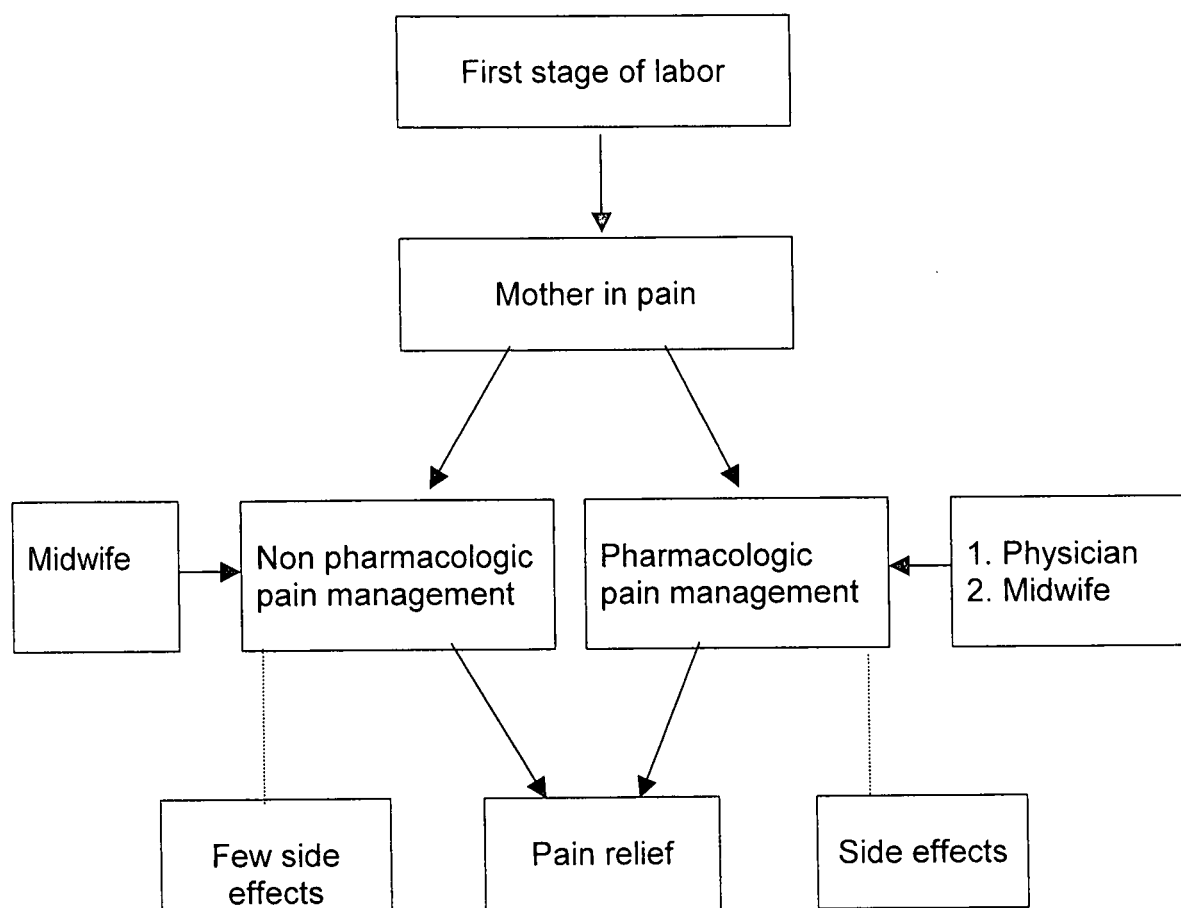


Figure 1.1: Conceptual framework

The above illustration indicates that the mother experiences pain during the first stage of labor. The midwife uses non-pharmacologic methods independently to bring about pain relief for the mother. Non-pharmacologic methods have few side effects. The midwife and the physician use pharmacologic management to bring about pain relief for the mother. Pharmacologic pain management has many side effects on both the mother and her fetus.

1.3.2 Definitions

For the purpose of this study, the following terms are defined as follows:

1.3.2.1 Midwife

Midwife is an individual currently registered as a midwife with the Lesotho Nursing Council, who renders health care to mothers during the first stage of labor in the maternity wards of both Government and Christian Health Association of Lesotho hospitals.

1.3.2.2 Mother

A mother is a pregnant women who is attended by the midwife during the first stage of labor in the maternity wards.

1.3.2.3 Pain

Pain is a distressing sensation in a particular part of the body that is associated with the first stage of labor, as experienced and expressed by each individual mother. It is whatever the experiencing mother says it is, and it exists whenever she says it does (Nichol & Zwelling, 1997: 825).

1.3.2.4 Pain relief

Pain relief is the way in which each individual mother perceives she has coped with the pain she experienced during the first stage of labor (McCrea & Wright, 1999: 878).

1.3.2.5 Non pharmacologic pain management

Non-pharmacologic pain management means any nursing measures other than medicines, used by midwives to assist mothers to cope with the pain they experience during the first stage of labor such as application of heat, adopting

different positions, mental stimulating techniques, paced breathing, massage and transcutaneous electric nerve stimulation (Nichol & Zwelling, 1997:824).

1.3.2.6 *First stage of labor*

The first stage of labor is the stage of dilatation of the cervix, beginning with regular rhythmic contractions and being completed when the cervix is fully (10 cm) dilated (Bennett & Brown, 2000: 392).

1.4 RESEARCH DESIGN

A descriptive study method will be used as this will provide a picture of the situation as it currently occurs in the Lesotho maternity wards. According to Burns & Grove (1997: 250) a descriptive design may be used for the purpose of the identification of problems with the current practice, justifying current practice, making judgements, or determining what others in similar situations are doing.

1.5 RESEARCH TECHNIQUES

A literature study will be done to compile a questionnaire consisting of both open and closed ended questions that will be used to collect data from the midwives working in the maternity wards of both Government and Christian Health Association of Lesotho Hospitals.

1.6 POPULATION

The study population devotes all the elements that meet the inclusion criteria of the study (Burns & Grove, 1993: 293). The target population was identified as eighty four (84) midwives working in the maternity wards of nine (9) government and eight (8) Christian Health Association of Lesotho Hospitals. Because of the

small number of midwives who work in the maternity wards, sampling will not be done. Instead, all the midwives who will be working in the maternity wards in March 2002, on both day and night shifts will be included in the study.

1.7 PILOT STUDY

A pilot study will be conducted to determine the clarity of questions, effectiveness of instructions, completeness of response sets, time required to complete the questionnaire and the success of data collection techniques. The researcher will request three midwives working in one hospital in Bloemfontein to complete the questionnaires. After they have been completed the questionnaires, the researcher will discuss with them the problems that they have encountered when completing the questionnaires and make the necessary corrections.

1.8 DATA COLLECTION

The researcher will mail questionnaires together with consent forms to the Senior Nursing Officers in charge of both the Government and Christian Health Association of Lesotho hospitals in March 2002. The questionnaire will enclose stamped, self-addressed envelopes for returning back the completed questionnaires. The Senior Nursing Officers will distribute the questionnaires to the midwives. The midwives will give back the completed questionnaires to the Senior Nursing Officers within two weeks after receiving them, who will then mail them back to the researcher.

The consent forms will be kept separate from the completed questionnaires. The researcher will also send reminders to the Senior Nursing Officers three weeks after the questionnaires were mailed to them, in order to remind those who have not returned them. The researcher will also make phone call follow-ups to the Senior Nursing Officers to increase the response rate.

1.9 VALIDITY AND RELIABILITY

The researcher will use a literature study and a pilot study to validate the questionnaire and to refine the research methodology. Allocation of the same time of three weeks for data collection and the use of the same data-collection instrument enhances validity and reliability of the study. The research protocol and the questionnaire have been evaluated by the Evaluation Committee of the School for Nursing, University of the Free State. The questionnaire has also been evaluated for content and face validity by specialists in midwifery from the School for Nursing, University of the Free State.

1.10 ETHICAL ISSUES

The researcher will submit the research protocol to the Ethics Committee of the Faculty of Health Sciences of the University of the Free State for a approval to conduct the study before the researcher will commence with the study. The researcher will also obtain permission to conduct the study from the Director General of the Ministry of Health and Social Welfare, Lesotho, the Executive Secretary of Christian Health Association of Lesotho and the authorities of the hospitals involved in the study.

The researcher will obtain informed consent from all the midwives that will participate in the study and will inform them that they are allowed to voluntarily participate in the study and that they are free to withdraw from the study at any time. The researcher will ensure confidentiality and anonymity for all the subjects by not allowing anybody access to the raw data of the study.

1.11 DATA ANALYSIS

Descriptive statistics, namely frequencies and percentages for categorical data and means and standard deviations or medians and percentiles for continuous

data will be calculated. The analysis will be done by the Department of Biostatistics of the University of the Free State.

1.12 THE VALUE OF THE STUDY

The study will facilitate identification of inadequacies in non-pharmacologic pain management rendered by midwives to women in Lesotho during first stage of labor and the strategies to improve it. The recommendations on the use of non-pharmacologic pain management during the first stage of labor can be applied to the maternity wards to improve the quality of nursing care rendered to mothers by midwives during the first stage of labor thus optimizing childbirth outcomes and maternal-neonatal health. This will decrease maternal and neonatal morbidity (and neonatal mortality) in Lesotho. The study will also increase the body of knowledge of nursing.

1.13 THE OUTLINE OF THE STUDY

The study consists of the following Chapters set out as follows:

- Chapter one consists of the introduction and problem statement.
- Chapter two reviews the literature of the use of non-pharmacologic methods of pain management by midwives during the first stage of labor.
- Chapter three outlines the research methodology used.
- Chapter four presents the research findings and the discussion of the data obtained during the study.
- Chapter five consists of the recommendations and conclusion of the study.

1.14 CONCLUSION

In this chapter the introduction and problem statement, aim and objectives, definitions and the research methodology that will be followed by the researcher are discussed. In the next chapter, the focus will be on the review of the literature regarding non-pharmacologic methods of pain management as well as the factors that influence the use of these methods by midwives during the first stage of labor. This extensive exploration of the literature underlies the reliability of the study and the questionnaire.

CHAPTER TWO

THE USE OF NON-PHARMACOLOGIC METHODS OF PAIN MANAGEMENT DURING THE FIRST STAGE OF LABOUR.

2.1 INTRODUCTION

It is well recognised that pain is a physiologic component of labour and birth (Nichol and Zwelling, 1997:23). Despite difficulties in measuring pain and determining how accurately it is recalled, one thing is certain: labour pain is greatly feared by most expectant mothers and fathers. Furthermore, many caregivers believe that labour pain is not only unpleasant, unnecessary and undesirable, but also destructive emotionally, physically or both (Simkin, 2000:254). However, labour pain receives a somehow narrow treatment assuming that pharmaceutical agents are the only relief measures invoked for its management. This is a misconception allowing it to be construed as an unusual or pathologic process (Moore, 1997:2; Nichol & Zwelling, 1997:823).

Intervention for pain and discomfort during labour and birth has traditionally been a focal point of midwifery practice and a major component of modern obstetric care, with a wide range of expression (Moore, 1997:2; Lowe, 1996:82). Pain management continues to be a challenge for midwives and its interventions exist along a continuum from non-pharmacological to pharmacological or a combination of both (McCrea & Wright, 1999:878; Moore, 1997:74; Simkin & Creehan, 1996:227; Gorrie, McKinney & Murray, 1994:366).

Midwives are the professionals responsible for providing care and support to a woman throughout the entire childbirth process, advising and informing throughout, invariably the care-provider, whether or not she has the support of a

partner, her family or friends (McCrea, Wright & Murphy-Black, 1998:176; Moore, 1997:2).

It becomes important for midwives and expectant parents to explore various strategies for diminishing or managing the pain of labour and birth, so that informed choices can be made regarding the desired pain relief measures (McCrea & Wright, 1999: 883; Nichol and Zwelling, 1997:824). This connotes a holistic approach embracing the physical and psychosocial aspects of care crucial in pain relief since the experience is subjective and variable (McCrea et al. 1998:176).

Many strategies may be used to alleviate pain and a major responsibility of the midwife is promoting comfort and using non-pharmacological techniques to minimise labour pain (May & Mahlmeister, 1994:485). Non-pharmacological approaches for pain relief developed in accordance with the gate control theory have been suggested as alternatives to epidurals (Labrecque, Nouwen, Bergeron & Rancourt, 1999:259). Relaxation-based non-pharmacological methods appear to address pain management by physiologic relaxation to decrease pain sensations at the origin through the use of distractors such as imagery and breathing techniques (Bennett & Brown, 2000:434).

2.2 DEFINITION OF NON-PHARMACOLOGICAL METHODS OF PAIN MANAGEMENT

Non-pharmacological methods of pain management are pain relief based on a variety of methods other than analgesics or anaesthetics (Nichol and Zwelling, 1997:824). It refers to a wide variety of cognitive behavioural and sensory interventions that may contribute to a mother's pain management by altering the nociceptive stimuli she perceives, modifying her central processing of nociceptive input, improving her overall sense of comfort and wellbeing, or bolstering her

coping skills. Chief among these interventions for the midwife is the therapeutic use of self in providing support to the parturient (Lowe, 1996:89).

Non pharmacological pain interventions represent a wide repertoire of methods that could be used one at a time or in combination, for one contraction or for many hours, by the woman, her support person or provider, and in most cases, independently by the midwife (Nichol and Zwelling, 1997:85). These methods of pain relief include visualisation and imagery, therapeutic touch and massage, music, patterned breathing, position changing and mobility, application of heat or cold, hydrotherapy, lay and professional support and hypnosis (Walsh, 2001: 293; McCrea & Wright, 1999:878).

2.3 PHYSIOLOGY OF LABOUR PAIN

Childbirth, while primarily a joyful event, also exposes the mother to one of the severest forms of pain reported. Labour associated with human childbirth is a painful experience, irrespective of social and ethnic backgrounds (Baker, Ferguson, Roach & Dawson, 2001:172). Labour pain is not well-understood. It is difficult to fully understand its causes and transmission, how it is perceived or how best to alleviate it (Bennett & Brown, 2000:431; Nichol and Zwelling, 1997:828). However, it is generally defined as having two basic components, a primary phenomenon consisting of apparent output from sensory receptors and secondary phenomenon involving processing and reaction (Lowe, 1996:82).

2.3.1 *Causes of pain during the first stage of labour*

Several physiologic changes that occur during labour are thought to be the major ones associated with pain. These include cervical stretching and pressure, hypoxia of the uterine muscle and stretching of abdominal peritoneum, traction of internal reproductive organs and ligaments and pressure on the urethra, bladder, rectum and increased intra-abdominal pressure (Rollant, Hamlin & Piotrowski, 2001:139; Baker et al. 2001:172; Bennett & Brown, 2000:432). In addition, fetal

size and position, a mother's expectations, her level of fatigue and anxiety and vaginal examinations contribute to her pain (Gorrie, McKinney & Murray, 1994:247).

The perception of acute pain during labour originates with transmission of noxious sensory input to the central nervous system. Both mechanical and chemical nociceptors have been found in the ovaries, uterus and broad ligaments. The increasing intensity of perceived pain commonly observed with the progression of labour may be attributable in part to a lowered response threshold in the mechanoreceptors and the release of pain producing substances which include bradykinin, histamine, serotonin, acetylcholine and potassium ions, which leads to chemoreceptor stimulation (Walsh, 2001:246; Lowe, 1996:83). Pain is a multidimensional experience with physiological, psychological and social components. On average the pain of childbirth has been rated as one of the most intense of all pains, but it is extremely variable. Labour pain is normally experienced in the first and second stages of labour during each contraction, although some women also experience continuous back pain (Niven & Murphy-Black, 2000:244).

2.3.2 Theories that explain the concept of pain

A number of theories have been developed to explain the concept of pain. Among these theories, two more current, accepted theories are the Gate Control theory and the Endogenous Biochemical Pain Control theory (Bennett & Brown, 2000: 431).

2.3.2.1 The Gate Control Theory

Melzack and Wall in Nicol and Zwelling (1997:828) hypothesised that pain impulses transmitted from nerve receptors through the spinal cord to the brain can be altered in the spinal cord, the brain stem and the cerebral cortex.

Substantia gelatinosa is thought to trigger the closure of the "gates" by a blocking action, keeping pain impulses from reaching the brain, and also limiting the activation of T cells normally responsible for transmitting pain (Nichol & Zwelling, 1997: 828; Gorrie, McKinney & Murray, 1994: 247 – 8). Several inhibitory mechanisms can be activated to stimulate the substantia gelatinosa to close the gates: stimulation of large diameter, afferent nerves in the cutaneous tissue can block transmission of pain impulses along small diameter nerve fibres and stimulation of the brain stem, thalamus and cerebral cortex (Benette & Brown, 2000: 431).

The gate control theory may be implemented to interrupt pain impulse transmission (Sherwen, Scoloveno & Weingarten, 1995: 574). This gate control mechanism can be initiated through the use of different non-pharmacological methods of pain management (Walsh, 2001: 247).

2.3.2.2 *Endogenous Biochemical Pain Control Theory*

Complementary to the Gate Control theory, this theory focuses on opiate-like substances within the body including endorphins and enkephalins, giving natural analgesia. The pain activity initiates production and dissemination of these endorphins, which in turn travel to the opiate-receptors where they inhibit pain transmission. They also cause an individual to feel relaxed, drowsy or euphoric (Nichol & Zwelling, 1997: 829).

It has been proposed that many non-pharmacological methods of pain management may further facilitate the production of endorphins (Walsh, 2001: 247). It is important for the midwives to apply both theories when providing care and support to mothers, helping them cope with and manage pain during the first stage of labour.

2.4 FACTORS THAT INFLUENCE THE USE OF NON-PHARMACOLOGICAL METHODS OF PAIN MANAGEMENT BY MIDWIVES DURING THE FIRST STAGE OF LABOUR

Although knowledge of how to effectively assess and manage pain has been available for the past years, midwives have not used this to improve the care of mothers in pain (Brockopp, Brockopp, Warden, Wilson, Carpenter & Vandever, 1998: 226). Care provided to women during the first stage of labour has become increasingly medicalised by midwives and doctors, who generally consider labour and birth as potentially pathological conditions for which the mother requires specialised and technological care (McCrea et al. 1998:178; Campero, Garcia, Diaz, Ortiz, Regnoso & Langer, 1998: 396). Because pain is generally a symptom associated with a disease or condition, it may not receive direct attention in a model of health care orientated towards cure (Brockopp et al. 1998: 227).

The dominant model of care in the labour unit based on the medical perspective of active management of labour seems to affect the amount of support the midwife offers to mothers (McCrea et al. 1998: 178). Some midwives have a fundamental belief that pharmacological methods are the only effective form of analgesia and are therefore likely to promote these more readily (Moore, 1997: 53).

In some obstetric units it is still the norm for hospitalised labouring mothers to be restricted to bedrest, yet this restriction may increase discomfort, thereby lessening the mothers' coping abilities (Walsh, 2001: 248). Sometimes mothers are encouraged to stay in bed once they are admitted in labour because of concern about cord prolapse during ambulation, which is a highly unlikely event even when membranes are ruptured (May & Mahlmeister, 1994: 498). The idea that all patients must sleep is still very prevalent among some midwives. Too

often mothers are pressured or even forced to take sleeping drugs against their will (Moore, 1997: 71).

Inadequate education among health care providers is one of the major reasons for ineffective management of pain (Brockopp et al. 1998: 226). Unfortunately, training and practice in the use of non-pharmacological methods to relieve labour pain are not included in the education of most midwives (Larimore & Cline, 2000: 227). Often, only a minor portion of education curricula is devoted to pain management (Brockopp et al. 1998: 226). This lack of knowledge is at least partially responsible for today's reliance on drug management of labour pain (Larimore & Cline, 2000: 227).

Fragmentation of maternity care is another issue to consider. Midwives who care for mothers in labour are generally not involved in childbirth preparation classes and therefore may not be aware of the coping methods learned (McCrea, Wright & Stringer, 2000: 498; Enkin, Keirse, Renfrew & Neilson, 1998: 195). The National Health Service may endorse the existing fragmented provision of maternity care, which ensures that many mothers delivering in hospitals would never have met their midwives before (Moore, 1997: 71).

In traditional care, mothers are usually admitted to combined labour and delivery rooms and then transferred to postpartum rooms. This multi-transfer, geographically based model of care promotes a "task" approach to nursing care rather than a holistic, client-centred approach (Janssen, Harris, Soolsma, Klein & Seymour, 2001: 173).

The ability of midwives to provide a consistent physical presence is strongly associated with institutional staffing in the birthing unit. Midwives in hospitals, especially busy perinatal units, are more likely to have assignments that include two or more women in labour (Walsh, 2001: 249). Furthermore, labour wards are typically staffed like medical wards according to an expected average patient

census, despite the fact that the typical labour ward census fluctuates much more widely, leading to times when providing continuous support is impossible (Hodnett, 1997: 4). Quite often midwives work only certain shifts, making it difficult for them to provide the kind of continuous emotional support a labouring mother needs (Hofmeyr, 1999: 88).

Today midwives find themselves further from the bedside because of technology and staffing shifts (Enkin et al. 1998: 195). Again they often have tasks other than supportive care, such as maternal and foetal assessments, administering medication and charting (Perez & Herrick, 1998: 54). A midwife working in a busy labour ward with high rates of epidural anaesthesia, inductions of labour and caesarean deliveries, may have little time available to spend on supporting mothers in labour (Hodnett, 1997: 4). Moreover, midwives strive towards meeting the needs of obstetricians rather than the needs of mothers and ensuring that mothers do not upset the status quo, thus maintaining smooth running of the ward (McCrea et al. 1998: 179). Unless the mother has her "own" midwife for the whole labour process; hospital midwives are usually far too busy with clinical tasks and have more than one mother to care for (Hofmeyr, 1999: 88). Less time is spent on communicating effectively with mothers or in providing emotional support (McCrea et al. 1998: 178).

The labouring mother may be left alone for long periods due to shortage of midwives (Kardong-Edgren, 2001: 372; Madi, Sandall, Bennett & Macleod, 1999: 4). The shortages of the time are recognised, but it must be concluded that no need is perceived to mitigate the frightening effects of the hospital environment by supportive companionship. Thus, mothers labouring in hospitals are expected to get on with it on their own, and this expectation remained in the culture of many hospitals for decades (Moore, 1997: 74). In most cases, the emotional needs and subjective experiences of mothers during labour are not recognised as important by midwives and hospital administrators, and consequently not taken into consideration (Campero et al. 1998: 396). Mothers who are taught

non-pharmacological methods antenatally are not able or enabled to use them during labour because midwives do not believe in them (Moore, 1997). McNiven, Hodnett & O'Brien-Pallas (1992) in Chen, Wang & Chang, (2001: 180) concluded that supportive care is devalued as an aspect of nursing care. Such a perspective is regrettable, since human communication is important to the health of mothers during childbirth, especially in a high technology obstetric environment.

The reasons why midwives do not spend substantial amount of time providing supportive care during labour may be more complicated than a lack of time and abilities (Miltner, 2000: 491). No intrinsic rewards exist for providing one-to-one labour support. Many labour and delivery units do not build the ability to provide one-to-one support in labour into a clinical ladder and do not provide funding for midwives to be certified in this area of care (Kardong-Edgren, 2001: 373). Some experienced midwives are resistant to change or implementing evidence-based practice and discourage new nursing graduates and student nurses from challenging traditional practices. Ultimately the young midwives follow the same pattern (Kardong-Edgren, 2001: 373).

There are instances in midwifery practice whereby mothers with specific idiosyncratic thoughts and ideas about how they expect their pregnancy and labour to progress are viewed in a stereotypical way and suffer prejudice from midwives. Midwives' attitude towards certain non-pharmacological methods is sometimes hostile, hence midwives electing not to use them during the first stage of labour (Moore, 1997: 53 – 56).

Most public hospitals do not allow the mother's partner or any other person selected by the mother in labour to enter the labour ward. This deprives mothers of the support they traditionally received from their families, friends and/or women of their community. Therefore they experience distress or anxiety and pain at the prospect of giving birth "alone" (Campero et al. 1998: 396). In

Botswana, the mother in labour is usually accompanied to hospital by her mother who, because of hospital policies prohibiting companions, is asked to wait outside until after delivery, mainly due to lack of space and privacy in the labour ward (Madi, Sandall, Bennett & Macleod, 1999: 4; Nikodem, Nolte, Wolman, Gulmezoglu & Hofmeyr, 1998: 11).

Other factors that influence the use of non-pharmacological methods include the midwives' age groups, parity and their personal experience of labour (McCrea et al. 1998: 179). Specifically, the midwives' personal experiences with pain also influence their evaluation of the labouring mother's pain (Nichol & Zwelling, 1997: 856).

Thus, the identification of the factors that influence the use of non-pharmacological methods of pain management by midwives during the first stage of labour may necessitate alterations in the current work activities of midwives, so that they are able to spend less time on ineffective activities and more time providing support and comfort measures to mothers.

2.5 NON-PHARMACOLOGICAL METHODS OF PAIN MANAGEMENT

Several non-pharmacological options are available to relieve pain during labour (Sherwen, Scoloveno & Weingarten, 1995: 571). A wide range of simple, effective, low cost methods can be initiated by midwives to promote the labouring mother's physical comfort and relieve pain with the potential benefits of reduction in the use of riskier medications and improved patient satisfaction (Larimore & Cline, 2000: 227; Lowe, 1996: 89).

2.5.1 *Childbirth preparation*

Childbirth preparation programmes usually incorporate a variety of non-pharmacological approaches to pain relief (Walsh, 2001: 249). The labour techniques of relaxation, patterned breathing, and attention focusing have been effective mainstays of childbirth preparation for decades (Petrie & Peck, 2000: 131 – 132). An increasing body of evidence in scientific literature indicates that a well-prepared mother with good labour support is unlikely to need analgesia or anaesthesia (Larimore & Cline, 2000: 230). Thus, the techniques taught in childbirth preparation classes can, in general, be said to be helpful for women who wish to avoid or minimise their use of pain medication in labour (May & Mahlmeister, 1994: 422).

The ideal time to learn non-pharmacological pain management is before labour. The mother learns about labour, including its painful aspects and a variety of skills to confront pain while her support person learn specific methods to encourage and support her (Gorrie, McKinney & Murray, 1994: 366). Women need to be taught how to be with birth, rather than how to give birth. Thus, the midwife can reduce the mother's anxiety by introducing a vocabulary of birth (Walsh, 2001: 271). The midwife can best teach the unprepared woman or her support person, or reinforce the learned methods during the latent phase of the first stage, when the woman is comfortable enough to understand the teaching (Gorrie, et al. 1994: 366). The more one understands about what is happening, the less frightening, and therefore painful it will be (Weiss, 2000: 2).

2.5.2 *Meeting the mother for the first time*

Mothers often do not meet midwives before admission to a labour ward. In addition, during their stay in hospital they do not have a chance to get used to any single midwife. The midwife who admits them to the ward is not necessarily the one who is going to be caring for them throughout their labour (Madi et al.

1999: 5). Being cared for in labour by a midwife whom the mother knows may be reassuring to the mother and reduce her need for pharmacological pain relief (Moore, 1997: 55).

Midwives should build a relationship with prospective mothers during pregnancy in order to allow each mother to establish that complete confidence in her midwife or midwives, without which her willing cooperation cannot be secured. Building of confidence is best achieved when the mother is under continuous care by the same midwife, throughout the entire childbirth process (Moore, 1997: 69). Ideally, a system of continuity in carer, where one midwife or a small group of midwives work with the mother throughout her childbirth process, would foster and encourage personal control in pain relief. The named midwife concept and development of midwife-led units would be valuable in implementing this recommendation (McCrea & Wright, 1999: 883).

2.5.3 *The midwife-mother ratio*

Madi et al. (1999: 5) in their study demonstrated that when the ratio of midwives to mothers is 1:4, it is impossible to provide one-to-one support. According to Gagnon & Waghorn (1996: 6), in times of reduced hospital budgets it is unrealistic to suggest an increase in staff to provide one-to-one nursing care, especially because even when one-to-one support were possible, the amount of supportive care rendered by midwives remained unchanged.

Midwives attending births in homes are most likely to provide ongoing one-to-one support and care. Out-of-hospital birth centres also are more likely to provide consistent midwifery and nursing support (Walsh, 2001: 249).

2.5.4 *The environment*

Some mothers may not be familiar with the infrastructure at the hospital (Madi et al. 1999: 5). The unfamiliar physical environment of the birth setting alone may contribute to sensory overload (May & Mahlmeister, 1994: 500). Many mothers are still allowed to approach their first (and successive) confinements in communal labour wards. Open first stage rooms are still common, and even privacy for delivery is still not guaranteed. This makes it difficult to practice relaxation (Moore, 1997: 73).

The environment should be conducive to rest and relaxation (May & Mahlmeister, 1994: 500). A relaxed, homely atmosphere will help the mother and her support person(s) to feel more comfortable and at ease (<http://pregnancy.about.com>, 2000:2). A pleasant sitting room with a variety of comfortable chairs, with a television set used for distraction is a desirable provision (Cingo, 2001: 69). Light should be versatile. Many mothers prefer subdued lighting or semi-darkness while in labour (<http://pregnancy.about.com>, 2000:2). Soft soothing lighting from candles can be very comforting as the mother feels less exposed and less vulnerable (Cingo, 2001: 69). Candles also have a pleasant scent and provide warmth, setting the environment to be conducive to relaxation, thus reducing the mothers pain perception (<http://pregnancy.about.com>, 2000:2).

An important role of the midwife is to protect the childbirth process from intrusions, providing quiet, dimmed lighting, privacy, and decreased stimuli (Walsh, 2001: 272). The midwife should maintain an unhurried, peaceful atmosphere (Cingo, 2001: 69). She should avoid asking the mother questions during a contraction and subjecting her to chatting that is unimportant, and should use hushed tones. All these promote comfort during labour (<http://pregnant.about.com>, 2000:2).

2.5.5 *The birth plan*

The birth plan is a commonly used document the mother compiles together with the midwife, and on which she states her preferences for care during and after labour. Completing this document provides a useful opportunity for discussing pain relief and exchanging information between the mother and her midwife (Bennett & Brown, 2000: 433). The birth plan helps the mother to express her needs and preferences, including pain relief during labour, and enhances her confidence to confront her labour pain (Larimore & Cline, 2000: 230; Weiss, 2000:2).

Determining each mother's preference for her care in labour is a reasonable basis for care xzgiving activities (Chen, Wang & Chang, 2000: 1184). It is more appropriate to assess a mother's need for pain relief in labour through the use of an individual birth plan, which has been discussed with the midwife she knows (Moore, 1997: 60). Admission of the mother in labour provides an opportunity for the midwife to discuss with each individual mother and her partner any plans, which have already been prepared by them. For those who did not prepare a birth plan, the midwife should encourage the couple to consider any preferences they may have (Bennett & Brown, 2000: 400). Other methods that the midwife could use to assess labour pain include self-report by verbal or numerical scale, non-verbal cues, visual analogue scales and the McGill pain questionnaire (Lawler, 1997:3). This helps the midwife to determine the mother's ability to cope with pain and to offer the mother the necessary support (Moore, 1997: 17).

Midwives rely on both verbal and non-verbal cues to assess pain levels. However, action requiring support or pain management may be better mediated by verbal cues. The midwife may employ a combination of both verbal and non-verbal cues to ensure that the experience of childbirth remains a positive event (Baker, Ferguson, Roach & Dawson, 2001: 171 – 172).

2.5.6 *Labour support*

Continuous labour support, provided under widely varying circumstances by women with varying levels of training, results in less distress from pain and lower rates of analgesia and anaesthesia use (Walsh, 2001: 249; Hodnett, 1997: 79; Nichol & Zwelling, 1997: 835). Quality support during labour, whether offered by a midwife, a doula, the mother's partner, other family members or friends, has a tremendous impact on the mother's perception of pain and her ability to cope (Nikodem, Nolte, Wolman, Gulmezuglu & Hofmeyr, 1998: 11 – 12; Campero et al. 1998: 397).

Handling pain requires that support should be provided by a support person who understands how labour feels, and who has a baby (Kitzinger, 2002: 33; Larimore & Cline, 2000: 228). The continuous presence of a female support person is one of the best documented "simple" techniques associated with decreased levels of pain experienced by mothers in labour (Hofmeyr, 1999: 93; Kardong-Edregen, 2001: 372). The presence of the female relative in labour is a low cost intervention for pain relief that may be offered in developing countries, where female companionship is still a traditional practice for the young mother in particular, or in developed countries where the current practice tends to involve the presence of a male partner (Madi et al. 1999:5).

In birthing units where one-to-one support is not possible, midwives could encourage the use of doulas as they provide personalized care on a continuous basis by using non pharmacological pain relief and comfort measures (Perez & Herrick, 1998:54 – 55). A randomised trial showed that the presence of a doula with a mother and her male partner resulted in a significantly reduced need for epidural analgesia, compared to woman whose male partner was the sole source of continuous support (Kennell & McGrath, 1999:10). Moreover, female labour support persons, often having given birth themselves, have a wonderful intuitive

ability to show empathy and encourage other women in labour (Hofmeyr, 1999: 89).

Most support persons benefit from the assistance and support of the midwife during labour (Nichol & Zwelling, 1997: 835). The midwife's presence is absolutely essential to support the mother and her partner through the first stage of labour, particularly the transitional phase, due to the potential overwhelming pain during this phase (May & Mahlmeister, 1994: 503). Midwives should make every effort to ensure that all labouring mothers receive support, not only from those close to them but also from the midwives themselves. This support should include continuous presence, the provision of hands-on comfort, and praise and encouragement (Enkin et al. 1998:197).

2.5.7 *Positioning and mobility*

Physiologic positioning is a major component of pain management and women throughout the world use it to make labour more comfortable and efficient. There is no single ideal position, women will constantly change positions to be comfortable and no reason to stop them seems to exist (Larimore & Cline, 2000: 231). Changing position is a simple, harmless tool the midwife or the mother herself can use (May & Mahlmeister, 1994: 498). Most mothers left to their own devices tend to adopt a variety of positions for labour, and favour being in the upright position or on all fours. Being supported by the midwife, the mother should follow her natural instincts and find positions and movements that feel right for her (Walsh, 2001: 250; Bennett & Brown, 2000: 435; Otte, 1999: 91).

Research indicates that mothers prefer a mixture of positions, including sitting and standing or walking on all fours for most of the first stage, and lying down only late in labour (May & Mahlmeister, 1994: 498). Unassisted labouring women will assume, over 50 percent of the time, standing, crouching, squatting, sitting or kneeling positions (Larimore & Cline, 2000: 230). These different

positions decrease the mother's pain and her need for pain relieving drugs (Kitzinger, 2000: 33). Being mobile during labour also keeps the mother's mind focused and adopting the all fours position decreases pain from babies in the occipito posterior positions (Otte, 1999: 91).

Any pain may feel worse if a person is stuck in one position, unable to move, like in most hospital settings where mothers are confined to bed from the time of admission until the time of delivery (Kitzinger, 2002: 33). Midwives should help mothers to find comfortable positions and encourage them to change positions from time to time to increase comfort and decrease muscle fatigue. They could make use of wedges, beanbags, pillows and chairs to enhance maternal comfort (Bennett & Brown, 2000: 435).

2.5.8 *Vocalisation*

Although mothers often are admonished to not make noise during labour, a more active approach to behaviour during labour embraces the idea of giving a voice to the pain. Vocalisation may include groaning, moaning, or chanting repeated phrases. The sensitive midwife can help by giving "permission" to make noise and directing the labouring mother's effort into low pitched or guttural sound (Lowe, 1996: 90).

2.5.9 *The application of heat or cold*

The use of heat or cold for relief of pain and discomfort is a fundamental nursing practice, though it is often overlooked for use to relieve pain during labour. Pain relief and comfort may be achieved through application of moist compresses, warm towels, a hot water bottle, a moist heating pad, immersion in warm water, a shower, and touch and massage (Nichol & Zwelling, 1997: 834 – 835; Walsh, 2001: 252).

The use of cold could aid general comfort if the mother is warm from the work of labour. A cool facecloth could be placed on the mother's forehead or used to wipe her face, chest, arms and hands. Ice could be applied to the sacral area, or even ice chips offered to the mother for eating or sucking. Alternating cold and heat helps prevent habituation (Walsh, 2001: 252; Cingo, 2001: 69; Nichol & Zwelling, 1997: 835; Gorrie et al. 1994: 250).

2.5.9.1 *Hydrotherapy*

The use of water during labour has been practiced for many years as a means for managing labour pain without drugs. Showers, baths and whirlpool baths (Jacuzzis) to alleviate pain and stress are commonplace in both domestic and therapeutic settings. It is curious, given the phenomenon of labour - a time of intense pain and distress - so few birthing units are equipped with such a familiar comfort measure (Rush, Burlock, Lambert, Loosley-Millman, Hutchison & Enkin, 1996: 136). Ideally, there should be a private bathroom, including a tub and a shower for each mother in labour (May & Mahlmeister, 1994: 497).

Immersion in warm water (with a temperature of 36° to 37°) with or without a whirlpool has been demonstrated to reduce pain by relaxation, warmth, skin stimulation, and hydrostatic pressure (Petrie & Peck, 2000: 130; Sherwen et al. 1995: 573). All these stimuli are able to close the gate for pain at the level of the dorsal horn, thereby decreasing the perception of pain and the use of analgesia (Walsh, 2001: 291). Immersion in water during the first stage of labour is also associated with a trend to decrease the use of other pain relief methods (Larimore & Cline, 2000: 227). The mother feels less cumbersome, she can be more mobile in water and would more readily experiment with alternative positions (Bennett & Brown, 2000: 439). Most evidence on the effectiveness of immersion in water has been provided from observational, retrospective and empirical studies. Many have reported a reduction in the psychological tension

associated with labour and in the use of analgesia (Eckert, Turnbull & McLennan, 2001: 84 – 85).

2.5.9.2 *Touch and massage*

Touch is commonly used in labour outside the western culture as a method of providing pain relief, probably through the reduction of endogenous catecholamines and stimuli of large-diameter nerve fibres as proposed by the gate control therapy. It also facilitates the release of endorphins (Walsh, 2001: 250; Nichol & Zwelling, 1997: 834). Massage in labour is almost essential and massaging certain areas of the body will help to compete with pain messages for perception in the mother's brain, and reduce the sensation of pain (<http://pregnancy.about.com>, 2002:3). It has been found to be no less effective than commonly used pharmacological analgesics such as pethidine or entonox (Moore, 1997:50). The results of a randomised trial showed that massaged mothers reported a decrease in depressed mood, anxiety as well as pain (Field, Hernandez-Reif, Taylor, Quintino & Burman, 1997: 286).

Two of the most important comfort aids during labour are the midwife and the mother's support person, as they create the atmosphere the mother wants (Cingo, 2001: 69). They may massage any area of the body where the mother finds massage helpful (Bennett & Brown, 2000: 437). A shoulder massage combined with steady pressure against the back of the neck or head, and a foot massage could work wonders (Kitzinger, 2002: 35). The midwife may use various forms of touch to convey pain-reducing messages, including a pat of reassurance, a tight embrace, stroking the hair or a cheek in an affectionate gesture or more formal purposeful massage techniques. All these techniques communicate a message of caring, of wanting to be with the mother and help her (Enkin et al. 1998: 251). The midwife or the mother can perform effleurage, a type of massage that has been adopted in nursing as a traditional, non-pharmacological form of nursing therapy that promotes rest and relaxation

(Labyak & Metzger, 1997: 59). Effleurage also compliments the use of learned breathing techniques and provides a source of concentration when a specific pattern is used (Gorrie, et al. 1994: 367; May & Mahlmeister, 1994: 425).

The range of oils that can be used together with massage in labour is considerable (Petrie & Peck, 2000: 121; Enkin et al. 1998: 253). It is wise to be guided by the mother's choice of oils because some may be nauseating or the mother may simply dislike the aroma (Tiran, 1996: 119). The oils can be massaged into the feet, abdomen, shoulders or the back (Petrie & Peck, 2000: 121; Tiran, 1996: 119). These oils are calming, dissipate stress and tension, relax and facilitate rest and sleep between contractions (Enkin et al. 1998: 253; Tiran, 1996: 17).

2.5.10 Breathing techniques

As with other coping strategies, the primary purpose of breathing techniques is to enhance relaxation and decrease the number of pain impulses that are recognised by the brain. The mother and her support person must practice the techniques frequently to gain comfort with them (Gorrie et al. 1994:251). Breathing techniques are not in themselves effective for pain management, therefore they must be combined with relaxation techniques (May & Mahlmeister, 1994:425). Breathing is what mothers think of when they think of non-medical pain relief measures, a bunch of mothers hee-hee-hooing through labour. Breathing is much more than this; in fact, a lot of mothers never use patterned breathing. Controlling breathing to be slow and relaxed is more conducive to relaxation and a sense of control over one's body (Weiss, 2000:3).

Breathing in the first stage of labour consists of a cleansing breath and various breathing techniques known as paced breathing. These techniques include slow paced breathing, and modified paced breathing to prevent pushing (Gorrie et al. 1994:251 – 2). All techniques can be used readily by the midwife to enhance the

quality of the birth experience (May & Mahlmeister, 1994:425). Midwives often teach slow paced breathing to women who enter labour unprepared. It is easy to learn between contractions and with the support of the midwife; even a frightened mother becomes calm and able to work with her contractions. Adding other pain relief approaches such as effleurage may help prolong the effectiveness of the breathing technique used (Gorrie et al. 1994:251 – 2; May & Mahlmeister, 1994:425). During the first stage of labour when the cervix is dilating, breathing slowly and fully through contractions may ease the pain. Alternatively the mother may find it better to breath more lightly and quickly as contractions peak. The mother should trust her body, as it knows exactly what to do (Kritzinger, 2002:34). Midwives should encourage patterned breathing to distract the labouring mother from her pain and to involve her partner in her care. Used correctly it is purported to maintain oxygenation to the mother and baby, increase relaxation, decrease pain and anxiety and provide a means of focusing attention (Pugh, Milligan, Gray & Strickland, 1998:241).

2.5.11 *Mental stimulation techniques*

2.5.11.1 *Imagery/visualisation*

Imagery involves a temporary shift away from reality activities of the here and now, that can be used as a conscious activity pain management in childbirth (Nichol & Zwelling, 1997: 833). It enables the mother to achieve a relaxed state easily and release tension (May & Mahlmeister, 1994: 423). As with other non-pharmacological methods, practice is necessary during childbirth preparation for imagery to be most effective in reducing pain. Couples should be encouraged to practice imagining themselves in scenes of their own choosing (Kitzinger, 2002: 353; Nichol & Zwelling, 1997: 833). Practicing may help the mother to identify the technique that will help her more. Though she needs to try concentrating on

what will help her through labour, she should be prepared to be flexible (<http://pregnancy.about.com>, 2000:4)

The role of the midwife in imagery is to provide support to the mother and to maintain a calm and quiet environment (Nichol & Zwelling, 1997: 833; Gorrie et al. 1994: 251). The midwife should communicate in a calm, soothing voice and reduce noxious stimuli that distract from relaxation and visualisation. She should also explain the techniques to the mother's support person, who may be able to help the mother visualise calm, favourite scenes or may have special knowledge about things the mother finds calming (May & Mahlmeister, 1994: 497). The midwife can also encourage the mother to place a small ornament or a picture that has a special meaning for her at her bedside to help her focus during labour (Cingo, 2001: 69). Although it is more effective when practiced before labour, imagery can be used to help an untrained mother, if suggestions are simple and within her frame of reference, but the midwife must provide clear, concise instructions (Nichol & Zwelling, 1997: 833; May & Mahlmeister, 1994: 423). She can coach the untrained mother by having her close her eyes and visualise a place where she has felt rested and safe (Walsh, 2001: 249).

Imagery added to the use of relaxation techniques and breathing strategies during labour could provide a powerful means of controlling pain (Nichol & Zwelling, 1997: 834).

2.5.11.2 Meditation

Meditation is said to have a calming effect, assisting the mother in becoming attuned to her body and giving a focus for distraction from pain and tension (Bennett & Brown, 2000: 440).

2.5.11.3 Music

In childbirth, the physical and emotional responses of the brain and body to music, particularly rhythm, may be a significant factor in the capacity of music to alleviate stress, pain, or both. Research using auxiolytic music in obstetrics indicated a significantly reduced need for drugs such as sedatives, analgesics and anaesthetics (Browning, 2000: 272; Oslon, 1998: 572). The midwife should encourage mothers to bring cassette players with tapes of their own choice and possibly personal headphones (Bennett & Brown, 2000: 434). Music from a tape recorder or phonograph creates a pleasant and relaxing ambiance, and music transmitted through earphones can block out disturbing, unpleasant sounds (Enkin et al. 1998: 255).

Many physiologic benefits seem to make music an ideal adjunct, to any technique aimed at relief of pain in childbirth (Browning, 2000: 272). When carefully chosen, music can be used to reinforce rhythmic breathing patterns and massage or to facilitate visualisation and induction of hypnosis. Thus, music may have the potential to reduce stress and enhance other pain relieving measures (Enkin et al. 1998: 255; Sherwen et al. 1995: 573). It also fosters even and controlled body movements for mothers, enhances relaxation, creates a happier atmosphere and involves the family as a unit (Oslon, 1998: 572).

Given the benefits of music in labour and the simplicity of its use in labour, it is important to determine its application by midwives during the first stage of labour.

2.5.11.4 Hypnosis

Hypnosis is a wonderful form of relaxation and heightened awareness that helps to reduce or eliminate pain (Blumenthal, 2001:70). It has been found to be an effective method of inducing physical and mental relaxation and controlling pain and also reduces the need for further analgesia (Moore, 1997:106; Nichol &

Zwelling, 1997:836). Hypnosis helps to divert her attention away from pain and concentrate on responding to the contractions with relaxation and correct breathing (Blumenthal, 2001:70). Under hypnosis, the mother demonstrates physical and mental relaxation, increased focus of concentration, and ability to modify perception (Enkin et al. 1998: 253).

2.5.12 Transcutaneous electrical nerve stimulation (TENS)

TENS, as a method of pain relief in labour, has been welcomed by many because it is non-pharmacological and not surgically invasive. There may be an element of distraction for the mother as she adjusts it and experiments with it (Bennett & Brown, 2000: 437 – 8). It is one of the most effective therapies for the sensory modulation through the gate control theory (McAlphine, 1998: 106; Sherwen et al. 1994: 574; Lowe, 1996: 90). Research demonstrated that when TENS is applied to the lower back, it significantly reduced back pain in 50 percent of mothers, subsequently reducing the need for epidural and other analgesia (Petrie & Peck, 2000: 131). TENS is ideal in short labours and may involve the release of endorphins, which reduce the awareness of pain (Neuberg, 1995: 161).

TENS may be safely used with other coping strategies such as relaxation and position changing. Midwives who are competent in the use of TENS should advise the mother that it can only help to modify their perception of pain, but will not eliminate the pain sensation entirely (Moore, 1997: 140).

2.6 Comfort measures

The midwives should relieve discomfort by using simple nursing actions to help the mothers to use their coping mechanisms to deal with pain (Ladewig, London & Olds, 1997: 429; Gorrie et al. 1994: 367). Altering the brightness of light sets

the environment to be conducive to relaxation, thereby reducing the mother's pain perception (Weiss, 2000: 2).

Dehydration could increase the mothers perception of pain. Therefore the mother should drink some fluids to keep her well hydrated during labor. Some mothers like sucking on a wet sponge (Cingo, 2001: 69). The mothers mouth will feel much fresher if she can clean her teeth or have a mouth wash. She may like to have some ice to suck (Bennett & Brown, 2000: 435). Brushing the teeth or rinsing out the mouth is a wonderful pick-me-up during labor (Cingo, 2001: 69).

2.7 MEASURES TO PROMOTE THE USE OF NON-PHARMACOLOGICAL METHODS OF PAIN MANAGEMENT DURING THE FIRST STAGE OF LABOUR

- Because effective pain relief demands not only an innovative practice but also requires the support of managers, midwives' initiatives must be recognised and encouraged and resources made available to put these innovations into practice. In this way midwives and managers can work with women to enhance personal control and increase satisfaction with pain relief (McCrea & Wright, 1999: 883).
- It is recommended that basic midwifery education incorporates the research findings in "being a midwife". This information should also be disseminated in post-basic continuing education to encourage midwives to examine their approach to pain relief (McCrea et al. 1998: 180).
- Co-ordination of antenatal training from pregnancy, throughout labour and delivery should replace the fragmented system currently in use so that midwives can get to know their clients and work with them in planning care (McCrea et al. 2000: 498).

- Midwives must be willing to provide comprehensive childbirth education that introduces mothers to a variety of pain management options, and to advocate the changing of practices and policies that inhibit the use of non-pharmacological methods (Lowe, 1996: 96).
- For the development of genuine woman-centred services where women, in partnership with midwives, exercise informed choice and are involved in, and have some control over the process of care, the nature and quality of the midwife-relationship must be accepted as an integral and crucial aspect of the service (Tinkler & Quinner, 1998: 34).
- The value of womens' own coping resources should be recognised and maximised in pain relief instead of emphasis being placed on pain medication. To this end women should be encouraged to identify and strengthen personal coping resources (McCrea & Wright, 1999: 883).
- Midwives need to adopt a flexible approach to care planning as an aspect of pain relief by giving appropriate information. Using this kind of approach, midwives can ensure that care is planned to meet the needs of individual women rather than adopting a blanket approach (McCrea et al. 2000: 1175).
- Depending on the circumstances, midwives should ensure the provision of continuous support. This may necessitate alterations in the current work activities of midwives, such that they are able to spend less time on ineffective activities and more time providing support (Larimore & Cline, 2000: 225).
- More flexible methods of staffing the labour wards should be adopted, which will permit midwife census to more closely match the mother census, and hospital policies that encourage the presence of experienced lay women should be adopted (Hodnett, 2001: 4).

- Providing labour support should not simply be left to midwives. Pregnant women should be encouraged to make arrangements with their midwives to have a support person of their choice during labour (Hofmeyr, 1999: 89; Nikodem et al. 1998: 12).
- Families should be admitted to one room, where they remain with the mother throughout the entire childbirth process (Janssen et al. 2001: 173).
- Midwives must be accountable in assessment of pain and prepared to act upon the results (Lawler, 1997: 8). Midwives must observe the mother for typical patterns of "behaviour" as this will help her to assess the mother's ability to cope with pain (Moore, 1997: 17). Pain assessment should be a collaborative process involving the mother (Lawler, 1997:5).
- It is recommended that in-service education on bedside music care be offered in labour wards. A narrower educational focus could be implemented that specifically helps midwives to identify appropriate uses and outcomes for bedside musical care as part of their assessment and ongoing treatment plan (Osion, 1998: 574).
- Midwives should make concerted efforts to find ways to ensure that women receive the support they need during labour.
- Midwives should assist healthy pregnant mothers with a hospital birth, home birth or water birth. Midwives can be in private practice or attached to a hospital (Schultz, 1999: 82). In countries where women look after other women it will be desirable that midwives implement the practice of allowing a female companion to offer support to mothers during labour (Madi et al. 1999: 8).

It is time for midwives to advocate team approach to care as it is designed to offer continuity of care and of caregiver to each mother so that she has the reassuring experience of meeting familiar people throughout her contact with the maternity service. The mother should be allocated to a team of midwives so that she gets to know them during pregnancy. Hopefully the midwife giving care in labour will therefore not be a stranger (Bennett & Brown, 2000: 433).

2.8 CONCLUSION

In this chapter, a review of literature regarding the construction of non-pharmacological pain management was discussed. Theories explaining pain perception and its control were also discussed. Factors that influence the use of non-pharmacological methods of pain management by midwives during the first stage of labour were identified and elaborated upon, as were the non-pharmacological method of pain management. Finally, the measures of how the midwives could promote the use of non-pharmacological methods of pain management during the first stage of labour were listed. In the next chapter, the research design and methodology will be discussed.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

A description of the research methodology, research process, validity and reliability as well as ethical considerations are necessary because they set guidelines as to how the research study should be conducted.

3.2 THE RESEARCH DESIGN

A non-experimental design was used to identify the non-pharmacological methods of pain management used by midwives during the first stage of labour as well as the factors that influence the use of these methods by midwives during the first stage of labour. A descriptive design may be used for the purpose of identifying problems with current practice, justifying current practice, making judgements, or determining what others in similar situations are doing (Burns & Grove, 1997: 251).

3.3 RESEARCH TECHNIQUES

3.3.1 *Literature review*

A literature review was carried out to collect data on non-pharmacological methods of pain management as well as to compile a questionnaire consisting of both open-ended and closed questions used to collect data from the midwives working in the maternity wards of both Government and Christian Health Association of Lesotho Hospitals.

3.3.2 Questionnaire

A questionnaire is a method of data collection designed to elicit information that can be obtained through written responses of the subject (Paraoh, 1997: 247; Bouma, 1993: 63). Questionnaires can be distributed to large samples within a short space of time, either directly or through the mail (Uys & Basson, 2000: 65; Burns & Grove, 1997: 358). According to Diamond in Fichardt (1996: 107) questionnaires are extremely effective tools for collecting discipline-specific information.

The questionnaire was used as the only data-collecting instrument. The questionnaire was accompanied by a covering letter, explaining the purpose of the study, the approximate amount of time required to complete the questionnaire and other instructions on return of the completed questionnaire (see annexure A).

The questionnaire (see annexure A) was divided into three parts (Section A, Section B and Section C). Section A contains questions A1 to A7 which pertain to the biographical data. Section B consists of questions B1 to B31 which focus mainly on the use of non-pharmacological methods of pain management by midwives during the first stage of labour while Section C consists of questions C32 to C38, regarding comfort measures applied during the first stage of labour.

3.3.3 Sampling

The target population was identified as eighty four (84) midwives working in the maternity wards of nine (9) Government and eight (8) Christian Health Association of Lesotho hospitals. Because of the small number of midwives who work in the maternity wards, no sampling method was used. Instead, the midwives who worked in the maternity wards in March 2002, on both day and night shifts, were included in the study. Five (5) midwives working in the one

government hospital did not respond at all and were therefore excluded from the study. Out of the remaining seventy nine (79), eleven (11) midwives were on leave in March 2002. Therefore questionnaires were distributed to sixty eight (68) midwives. Fifty four (54) midwives completed and returned the questionnaires (79% return rate).

3.4 VALIDITY AND RELIABILITY

3.4.1 *Validity*

Validity refers to the degree to which an instrument measures what it is supposed to be measuring (Uys & Basson, 2000: 80; Brink, 1996: 167; Burnard & Morrison, 1994: 74). Content validity refers to whether the questionnaire and the items it contains are representative of the content domain the researcher intends to measure. Face validity is a very primitive type of validity that verifies basically that the instrument "looks" like or gives the appearance of measuring the content (Polit, Beck and Hungler, 2001:309; Burns & Grove, 1997:782; Polit & Hungler, 1997: 457).

The researcher implemented the following steps to meet the demands of content and face validity:

- Literature on non-pharmacological methods of pain management during the first stage of labour was studied and the essential content to be covered by the questionnaire was identified.
- Both open-ended and closed questions were used to obtain a variety of data.
- The questionnaire was submitted to five domain experts for evaluation, two of whom being experts in the field of midwifery. The experts were asked to evaluate the adequacy of the content as well as the relevance of the

questions, and to make suggestions. The experts were also asked to evaluate the sequence of the items and the face validity of the instrument. The items were modified in accordance with the suggestions from the experts.

- A pilot test of the questionnaire was performed. Three midwives working in the labour ward of one hospital in Bloemfontein were used for the test. Respondents of the pilot study were asked to evaluate the questionnaire for ambiguity and clarity. The midwives were also asked to identify the time required to complete the questionnaire. The phraseology and/or construction of some questions were modified after the pilot study.
- The same period of four weeks were allocated for data collection.
- The respondents were requested to telephone the researcher if they encountered any problems during completion of the questionnaire.

3.4.2 Reliability

According to Uys & Basson (2000: 75) as well as Burns & Grove (1997: 778) reliability refers to the degree of consistency with which an instrument measures the attribute it is designed to measure.

The reliability of the questionnaire was ensured by requesting the respondents in the pilot study to complete a questionnaire three days after completion of the first one. The researcher checked both questionnaires of the three respondents for variation on specific questions and items answered. In this way ambiguous and unclear questions could be identified and modified. The response to both questionnaires was almost identical. It was accepted that reliability was proven.

3.5 DATA COLLECTION

The questionnaires were mailed to the principal/senior nursing officers in charge of both Government and Christian Health Association of Lesotho maternity wards. The principal/nursing officers distributed the questionnaires to the midwives in the maternity wards, on both day and night shifts. The midwives were requested (as stated in the covering letter) to complete the questionnaire within two weeks.

Strategies to increase the response rate, such as enclosing a stamped, addressed envelope and making follow-up telephone calls to remind the nursing officers to collect and mail back the questionnaire, and allocating an extension of another two weeks were implemented.

3.6 ETHICAL CONSIDERATIONS TAKEN INTO ACCOUNT

All research ethics must be considered when designing a research study. To comply with the ethical codes, the following ethical aspects were taken into consideration:

- Permission to carry out the research study was requested from and granted by the Ethics Committee, Faculty of Health Sciences of the University of the Free State (see Annexure B).
- Permission was also requested from and granted by the Director-General of Health and Social Welfare and the Executive Secretary of CHAL (see Annexure E and F).
- Since participation in a research study of any kind is voluntary, each questionnaire had to have a covering letter in which the nature and the purpose of the study were explained. The respondents were requested to

participate in the investigation by completing the questionnaires. The respondents were given a guarantee by the researcher that all information provided was to be treated with confidentiality and anonymity as no names were to be entered on the questionnaire (see Annexure A).

- The voluntary consent of all the respondents were obtained (see Annexure A).
- The respondents were given the chance to withdraw from the study any time they felt the need or desire to do so.

3.7 DATA ANALYSIS

Descriptive statistics, namely frequencies and percentages for categorical data and means, and statistical variations or medians and percentiles for continuous data were calculated. The analysis was done by the Department of Biostatistics of the University of the Free State.

3.8 PROBLEMS ENCOUNTERED DURING THE DATA COLLECTION

The following problems were encountered during the implementation of the research protocol:

- It took quite a long time for the researcher to obtain permission to conduct research in the government hospitals.
- Some midwives took the questionnaires but did not complete them within the time allocated but requested extension of time. Although extension was given, some midwives did not return the questionnaires.

- Some principal/senior nursing officers kept the questionnaires in their offices after receiving them, until reminder telephone calls were made by the researcher.
- Midwives of one government hospital took the questionnaires, but none of them returned the questionnaires to the office of the senior nursing officer. Therefore they were excluded from the study.

3.9 CONCLUSION

A non-experimental research design was used to investigate the research problem. The structured questionnaire was used in the study as a data-collecting instrument. The steps of the research process were followed, and the validity and reliability of the questionnaire as well as that of the whole study were ensured. The ethical considerations were adhered to. The analysis and discussion of the data follow in Chapter 4.

CHAPTER FOUR

DATA ANALYSIS

4.1 INTRODUCTION

According to Burns and Grove (1997:407) data analysis allows for the organisation of the data in ways that would give meaning to it and facilitate insight in order to examine a phenomenon from a variety of angles so as to understand more clearly what is being studied. In this study, the data is analysed according to descriptive statistics on a nominal level.

4.2 DATA REDUCTION

Quantitative data obtained from the answers of both open-ended and close-ended questions were coded by the researcher. Frequencies and percentages for categorical data, means and standard deviations, medians and percentiles for continuous data were calculated by the expert from the Department of Biostatistic of the University of the Free State.

4.3 THE EXPOSITION OF DATA OBTAINED FROM THE QUESTIONNAIRE COMPLETED BY THE MIDWIVES

The results of the data will be discussed under the following headings:

- Biographical data (Section A).
- The use of non-pharmacologic methods of pain management by the midwives during the first stage of labor (Section B).
- Comfort measures (Section C).

4.3.1 THE RESULTS OF THE BIOGRAPHIC DATA OBTAINED FROM THE RESPONDENTS

The following biographic data were obtained from the midwives, namely, age distribution, number of children they have, highest professional qualification in midwifery, type of institution where the highest professional qualification in midwifery was obtained, the current area of employment and the number of years of midwifery experience.

4.3.1.1 The midwives' ages

The ages of the respondents ranged from 23 (twenty-three) years to 51 (fifty-one) years with the mean age of 34 (thirty-four) years.

Table 4.1: Age distribution of respondents N= (54)

AGE	Frequency	Percent %
20 – 29 years	17	32
30 – 39 years	27	51
40 – 49 years	8	15
50 – 59 years	1	2

4.3.1.2 Children that the midwives have

Thirty seven (69%) of the respondents reported that they have children (see figure 4.1).

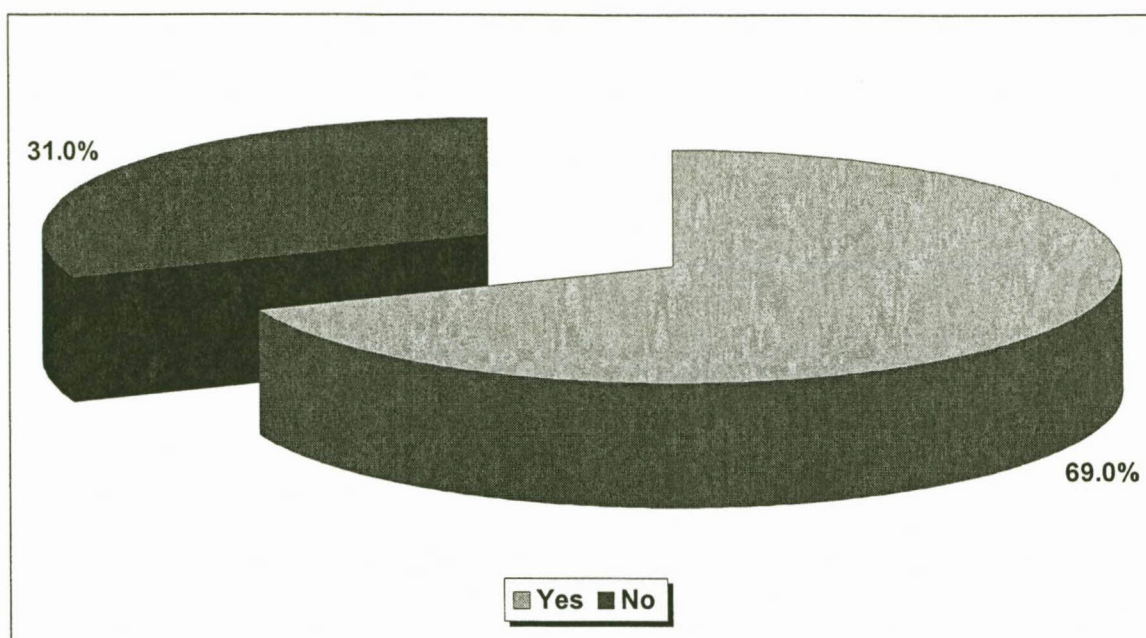


Figure 4.1: Children that the midwives have (N = 54)

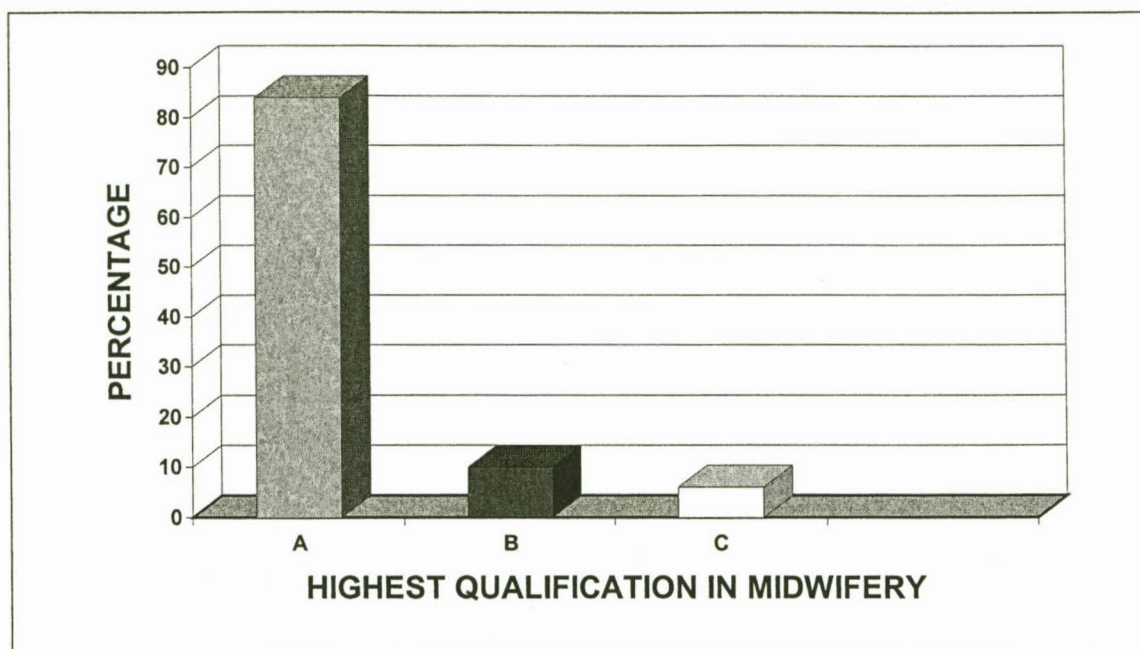
The majority of the respondents 23 (64%) who reported that they have children indicated that they have two or more children (see table 4.2). This implies that most of the midwives who render care to mothers during the first stage of labor have personally experienced labor pain at some stage in their lives. The midwives previous childbirth experience is among the factors that may influence the extent to which she applies the different non-pharmacologic methods of pain management during the first stage of labor (McCrea et al. 1998:179; Nicol and Zwelling, 1997:856).

Table 4.2: The number of children the midwives have (N = 36)

NUMBER OF CHILDREN	Frequency	Percent %
1	13	36
2	17	47
3	2	6
4	3	8
6	1	3

4.3.1.3 *The highest professional qualification in midwifery*

Most of the respondents (84%) indicated that they hold a diploma in midwifery as their highest professional qualification in midwifery. Ten percent of the respondents hold an advanced diploma in midwifery as their highest professional qualification in midwifery (see figure .4.2). These findings demonstrate that a diploma in midwifery is the highest professional qualification for most of the midwives and that none of the midwives hold a degree in midwifery. The midwives should have been taught about non-pharmacologic pain management even though they do not adequately use these methods to help mothers to cope with pain they experience during the first stage of labor. However, a minority (6%) of the respondents holds a certificate in midwifery as their highest professional qualification. This indicates that some of the midwives qualified long back and have deficient (or outdated) knowledge of the non-pharmacologic methods of pain management. Thus, the need for in-service or continuing education is evident.



A = DIPLOMA IN MIDWIFERY

B = DIPLOMA IN ADVANCED MIDWIFERY AND NEONATOLOGY

C = CERTIFICATE IN MIDWIFERY

Figure 4.2: HIGHEST PROFESSIONAL QUALIFICATION IN MIDWIFERY (N = 51).

4.2.1.4 The type of institution where the highest midwifery qualification was obtained

The analysis of this item gives an indication of the type of institution where the highest qualification in midwifery was obtained. Figure 4.3 highlights the fact that 51 (94%) obtained their highest qualification in midwifery at the college, whereas 3 (6%) respondents obtained their highest professional qualification from the University. It is evident that the majority of midwives who render care to mothers during the first stage of labor obtained their highest qualification in midwifery from a nursing college.

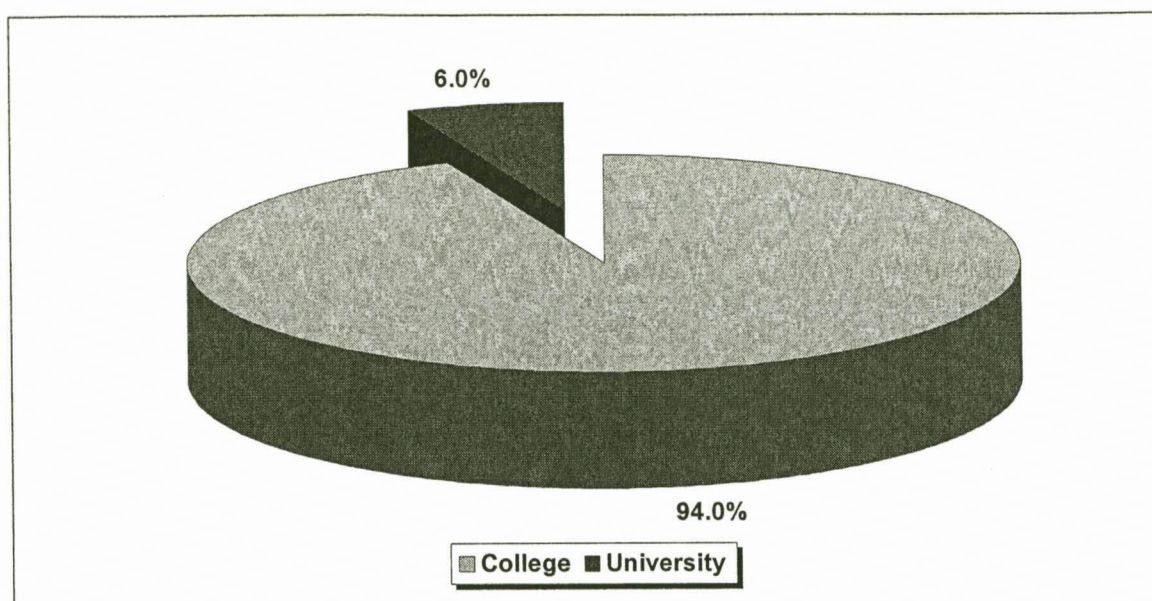


Figure 4.3: THE TYPE OF INSTITUTION WHERE THE HIGHEST QUALIFICATION WAS OBTAINED (N = 54)

4.2.1.5 The place of work

The majority 41 (76%) of the respondents work in government hospitals while 13 (24%) work in hospitals of the Christian Hospital Association of Lesotho (CHAL) (see figure 4.4). This implies that government hospitals have a greater population of midwives than that of CHAL hospitals.

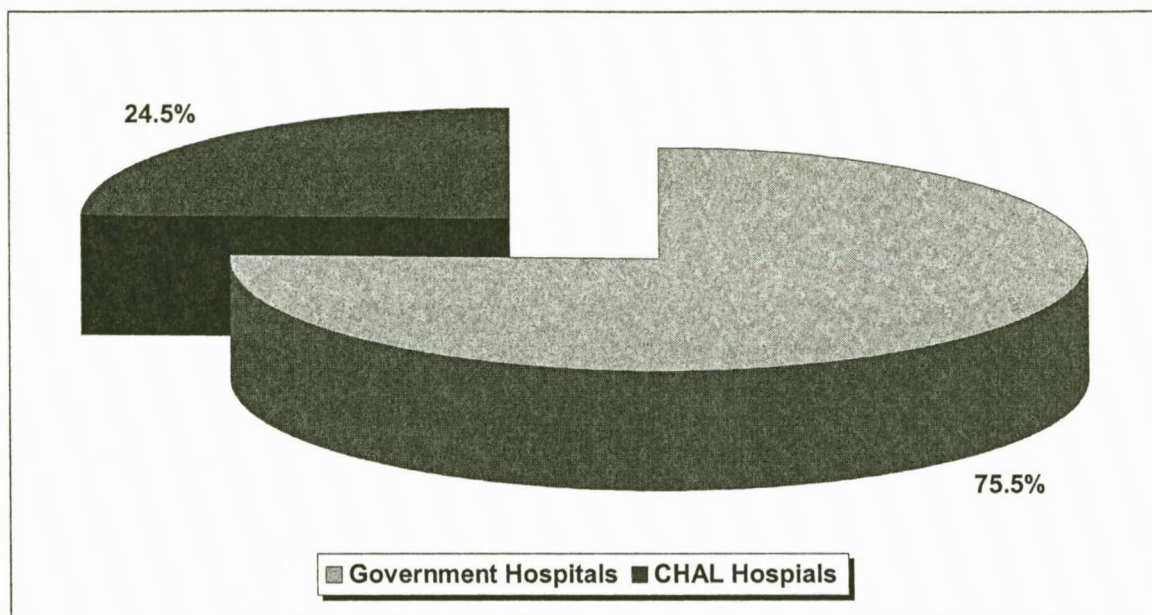


Figure 4.4: THE PLACE OF WORK (N = 54)

4.2.1.6 *The midwives' years of midwifery experience*

Figure 4.5 illustrates that 43 (80%) of the respondents have ten or less years of midwifery experience while 11 (20%) of the respondents have more than ten years of midwifery experience. Since previous studies have indicated that experienced midwives were resistant to change or to implementing evidence based practice and discourage new nursing graduates and student midwives from challenging traditional practice (Kardong-Edgren, 2001: 373), the midwives' experience of more than ten years seem to minimally hamper the use of non pharmacologic methods of pain during the first stage of labour.

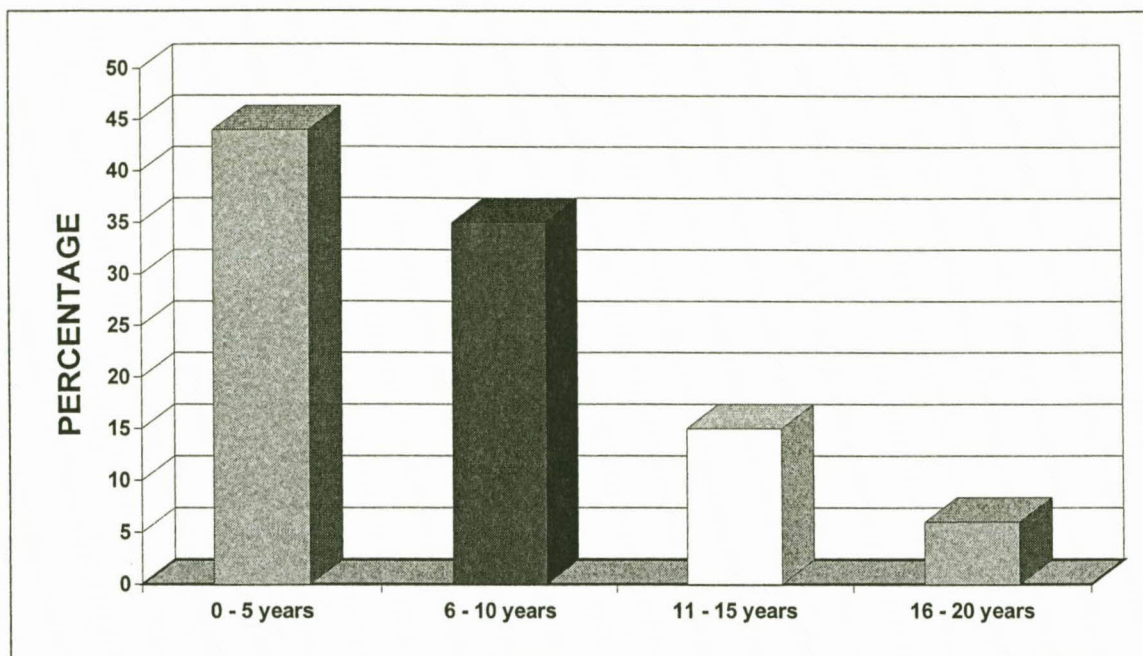


Figure 4.5: YEARS OF MIDWIFERY EXPERIENCE (N = 54)

4.3.2 THE RESULTS OF THE CONTENT ANALYSIS OF THE USE OF NON-PHARMACOLOGIC METHODS OF PAIN MANAGEMENT BY THE MIDWIVES DURING THE FIRST STAGE OF LABOR

4.3.2.1 Meeting the mother for the first time

The majority 39 (72%) of the respondents reported that they meet the mothers for the first time before labor. This gives an indication that midwives have the opportunity to prepare mothers for using non-pharmacologic methods of pain management during the first stage of labor. According to McCrea & Wright (1999: 883) and Moore (1997:69) building relationships with mothers enables them to establish complete confidence in their midwives, which foster and encourages personal control in pain relief.

Only 2(4%) of the respondents indicated that they meet the mothers during childbirth preparation classes. Thirty-six (67%) of the respondents indicated that they meet mothers for the first time during labor (see table 4.3). These findings illustrate that midwives do not teach mothers non-pharmacologic methods of pain management before labor. Thus, the use of these methods by midwives is compromised. According to Walsh (2001: 249) childbirth preparation classes usually in-cooperate a variety of non-pharmacologic approaches to pain management, thus helping the mother to avoid or minimise the use of pain medications in labor.

Table 4.3: MEETING THE MOTHER FOR THE FIRST TIME (N = 54)

MEETING THE MOTHER	FREQUENCY	PERCENTAGE %
Prenatal clinic	37	70
Labor ward	36	67
Childbirth preparation classes	2	3

4.3.2.2 Policy pertaining to pain management

The majority 46 (85%) of the respondents reported that their maternity wards do not have policies pertaining to pain management during the first stage of labor. Only 8 (15%) respondents reported that their maternity wards have policies pertaining to pain management during the first stage of labor (see figure 4.6). These findings highlight the fact that policies minimally influence the use of non-pharmacologic methods of pain management by the midwives during the first stage of labor. Non-pharmacologic methods of pain management do not require a physician’s order (Nichol & Zwelling, 1997: 857). Thus the midwives can use these methods to the maximum as independent practitioners.

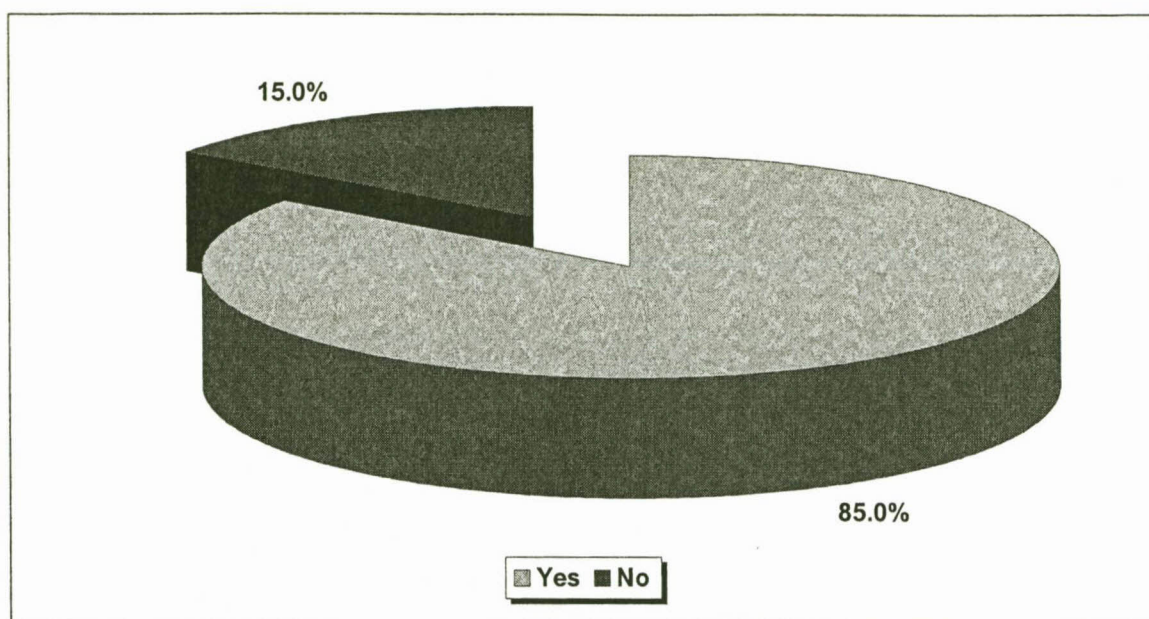


Figure 4.6: POLICY PERTAINING TO PAIN MANAGEMENT (N = 54).

4.3.2.3 *The midwife- mother ratio*

Most 34 (66%) of the respondents indicated a midwife-mother ratio of 1:3 and above for their maternity wards (see table 4.4). This finding implies that the midwife-mother ratio is one of the factors that contribute to the limited use of non-pharmacologic methods by the midwives during the first stage of labor as they do not have enough time to spend with each mother. Madi et al. (1999: 5) contend that it is impossible to provide one-to-one support to mothers when the ratio of midwife to mother is 1 to 4. On the other hand, ten (19%) of the respondents indicated the midwife-mother ratio of 1:2 and eight (15%) indicated the midwife-mother ratio of 1:1. With these ratios, it is realistic to expect the midwives to adequately use the non-pharmacologic methods of pain management during the first stage of labor. They, however do not always use these methods. Enkin et al. (2001: 6) contend that even when one-to-one care was possible, the amount to supportive care given by the midwives did not increase.

Table 4.4: THE MIDWIFE: MOTHER RATIO (N = 52)

MIDWIFE-MOTHER RATIO	FREQUENCY	PERCENTAGE %
1:3 and above	34	66
1:2	10	19
1:1	8	15

4.3.2.4 *Addressing the mother*

Most 52 (96%) of the respondents address the mothers by their names, and 6 (11%) address them as Miss or Mrs, while 2 (4%) of the respondents address as "me" or "ausi" (see table 4.5). These results imply that the midwives who render care to the mothers during the first stage of labor in both government and CHAL hospitals never address mothers as patients, which is good since referring to a mother as a patient reinforces the atmosphere of illness associated with being in a hospital, whereas calling her a women or mother promotes a wellness approach, thus keeping the focus on the normalcy of childbirth and enhances the use of non-pharmacologic methods of pain relief (Gorrie et al. 1994: 367).

Table 4.5: ADDRESSING THE MOTHER (N = 54)

ADDRESSING THE MOTHER	FREQUENCY	PERCENTAGE %
By her name	52	96
Miss/Mrs	6	11
Ausi/Me	2	4

4.3.2.5 Place of rendering care to mothers

The majority (70%) of the respondents indicated that they render care to mothers during the first stage of labor in the delivery rooms while 59% of the respondents indicated that they render care to mothers in the antenatal ward. Some (7%) of the respondents indicated that they render care to mothers in the admission rooms (see table 4.6). These findings demonstrate that midwives render care to mothers in different settings, which are unlikely to be furnished in a manner that is conducive to the use of non-pharmacologic methods of pain management.

Table 4.6: PLACE OF RENDERING CARE (N = 54)

PLACE OF RENDERING CARE	FREQUENCY	PERCENTAGE %
Delivery rooms	38	70
Antenatal ward	32	59
Admission rooms	4	7

4.3.2.6 The average length of time spend with the mother during the first stage

The length of time spend by the respondents with the mother during the first stage ranges from 0 hours to 12 hours, with the mean of 5 hours (see table 4.7). Though the respondents indicated that they spend a substantial amount of time, that time might be spent doing other clinical activities, instead of using non-pharmacologic methods of pain management to reduce or alleviate pain experienced by the mothers. According to McCrea et al. (1998:179) midwives spend less time giving emotional support such as listening to the mothers, holding their hands or giving encouragement and spend more time on indirect care activities.

**Table 4.7: AVERAGE LENGTH OF TIME SPEND WITH THE MOTHER
DURING THE FIRST STAGE (N = 49)**

LENGTH OF TIME SPENT HOURS	FREQUENCY	PERCENTAGE %
Less than 1 hour	2	4
1	4	8
2	5	10
3	6	12
4	4	8
5	5	10
6	2	4
7	1	2
8	13	26
9	2	4
10	2	4
11	1	2
12	2	4

4.3.2.7 Discussing with the mother her previous birth experience(s)

Most of the respondents 37 (69%) indicated that they sometimes discuss the mothers' previous experiences and 16 (30%) reported that they always discuss the mothers' previous birth experiences (see figure 4.7). It is distressing that only 16 (30%) respondents indicated that they always discuss the mother's previous experiences with them since this provides the midwife with the opportunity to identify those mothers for whom childbirth pain was traumatic and help them

resolve the traumatic aspects of the pain and also discuss non-pharmacologic methods of pain management used previously by mothers (Simkin, 2000: 255).

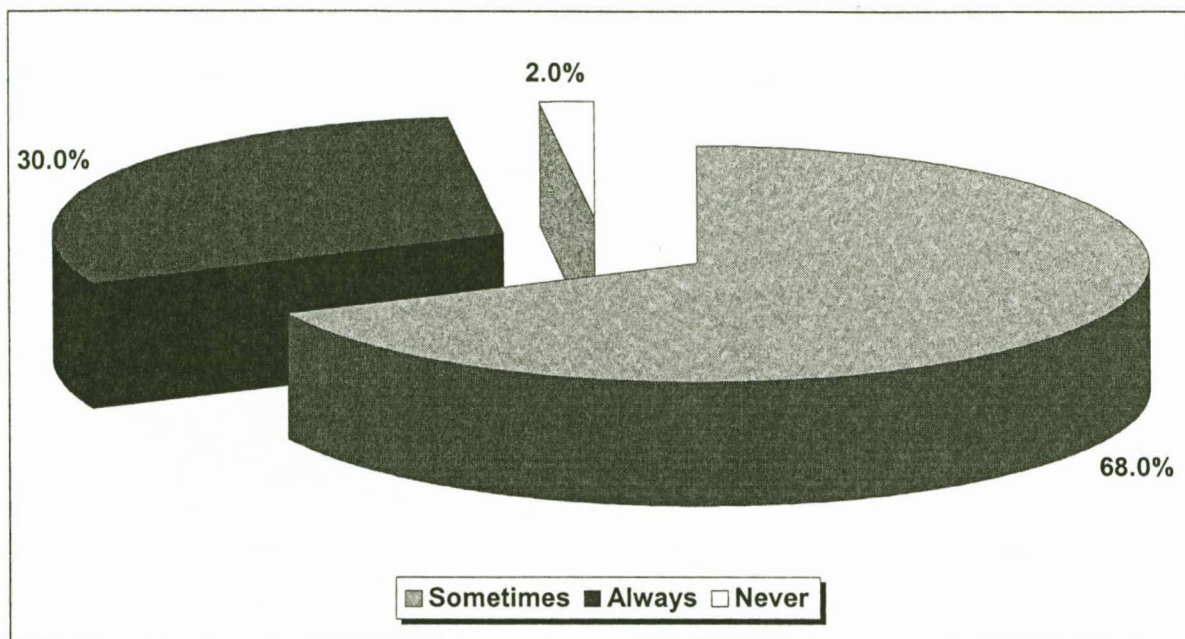


Figure 4.7: DISCUSSING THE MOTHERS' PREVIOUS BIRTH EXPERIENCES (N = 54).

4.3.2.8 *Discussing the mother's birth plan*

Many of the respondents (65%) reported that they do not discuss birth plans with the mothers. Only 19 (35%) of the respondents indicated that they discuss the birth plans with the mothers (see figure 4.8). Based on these results, it is evident that most of the midwives deny the mothers the opportunity to choose the method(s) of pain management they would prefer to use during the first stage of labor. According to Larimore and Cline (2000: 230) a birth plan helps the mother to express her preferred method(s) of pain management and thus enhance her confidence to confront labor pain.

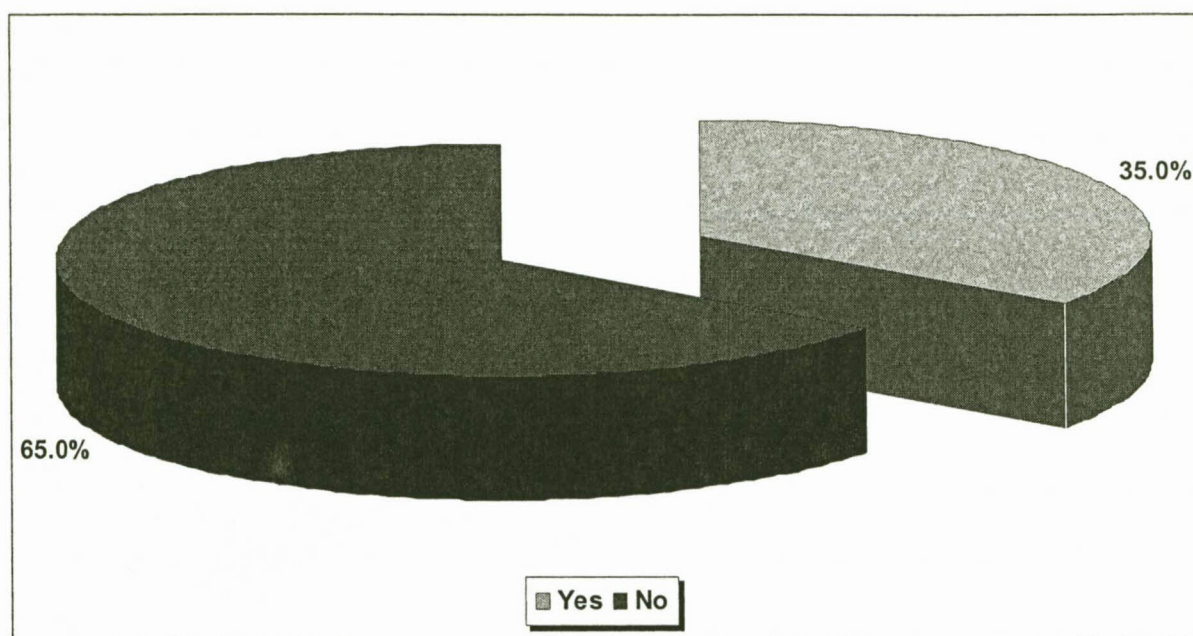


Figure 4.8: DISCUSS THE MOTHER'S BIRTH PLAN (N = 54)

4.3.2.9 Reasons for not discussing birth plans

The reason most 12 (36%) of the respondents gave for not discussing birth plans with mothers during the first stage of labor was that of a shortage of staff. This implies that midwives render care to more than one mother during the first stage of labor, and as such, find it difficult to spend enough time with each mother to be able to discuss birth plans. Probably the midwives spend most of their time on other tasks and less time on supportive care activities and do not involve mothers in their care planning. Therefore they fail to render individualized care to each mother, that could meet the mother's pain relief needs.

Nine (27%) of the respondents reported that mothers usually do not have birth plans (see table 4.8). This finding indicates that the midwives who render care to mothers during the first stage of labor are not involved in the antenatal care of those mothers. Moreover, they regard care planning as the responsibility of the midwives who render care to mothers antenatally, and consequently they miss

the opportunity to discuss birth plans with mothers on admission to the labor ward. Thus, fragmentation of care rendered by midwives to mothers during pregnancy and labor and the inadequate use of non-pharmacologic methods of pain management is evident. According to Bennett & Brown (2000: 400) admission to the mother in labor provides an opportunity for the midwife to discuss with each mother and her partner any plans they have already prepared and to encourage couples without prepared birth plans to consider any preferences they may have.

Some (27%) of the respondents reported that they do not discuss birth plans with mothers because mothers cannot concentrate due to the pain they experience during the first stage of labor while nine percent of the respondents indicated that they do not know about birth plans. These findings demonstrate that lack of knowledge influences the use of non-pharmacologic methods of pain management by the midwives.

Table 4.8: REASONS FOR NOT DISCUSSING THE BIRTH PLAN (N = 35)

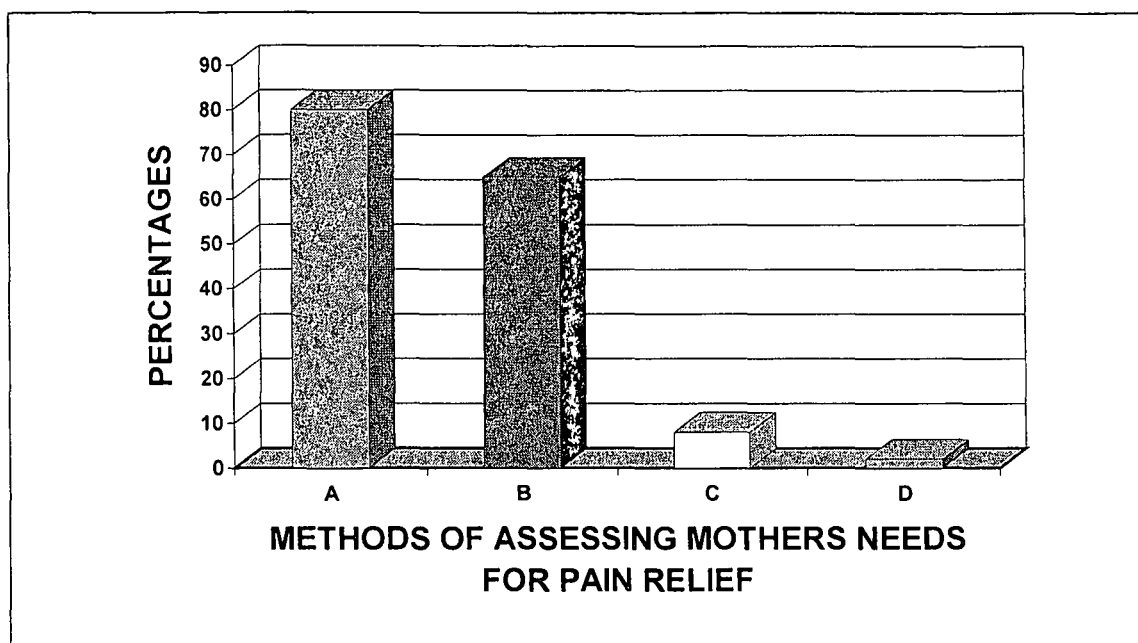
REASONS FOR NOT DISCUSSING BIRTH PLAN	FREQUENCY	PERCENTAGE %
Shortage of staff	13	37
Mothers cannot concentrate because of pain	9	27
Mothers usually do not have birth plans	9	27
Midwives do not know about birth plans	3	9

4.3.2.10 *Methods used to assess the mother's needs for pain relief*

Determining each mother's preferences for her care in labor, is a reasonable basis for care giving activities, including pain management (Cheng et al. 2000:1184). An analysis of the percentages presented in figure 4.9 indicated that 44 (81%) of the respondents use observation of the mother's behavior to assess her need for pain relief. Thus, the midwives decide for the mothers who should get pain relief and who should not. This clearly indicates that the majority of midwives do not provide care based on the needs of the mothers during the first stage of labor. Thirty five (65%) of the respondents reported that they use verbal report to assess the mothers needs for pain relief and 1 (2%) of the respondents indicated that she only assess the mothers labor progress. Probably these midwives give mothers' pain medication and neglect non-pharmacologic methods of pain management.

Some of the respondents (7%) reported that they do not assess the mother's need for pain relief during the first stage of labor. This finding implies that midwives do not allow the mothers to exercise their right of informed choice during labor. These findings imply that midwives mostly make decisions for mothers regarding pain relief during the first stage of labor, which is contradictory to Wright et al. (2000:1169) who stated that mothers are increasingly being encouraged to assume control in decisions concerning their pregnancy and child birth, including pain relief during labor.

It is alarming that none of the respondents reported that they use birth plans for assessing the mother's need for pain relief yet some of them warned that they discuss birth plans with mothers.



A = OBSERVATION OF MOTHER'S BEHAVIOR
 B = VERBAL REPORT
 C = NONE
 D = DETERMINING THE MOTHER'S LABOR PROGRESS

Figure 4.9: THE METHODS USED BY MIDWIVES TO ASSESS THE MOTHER'S NEED FOR PAIN RELIEF (N = 54).

4.3.2.11 *Discussing non-pharmacologic methods of pain management with the mothers*

Forty three (81%) of the respondents reported that they discuss non-pharmacologic methods of pain management with the mothers and 10 (19%) of the respondents reported that they do not discuss non-pharmacologic methods of pain management with the mother (see figure 4.10). It is surprising that most of the respondents indicated that they discuss non-pharmacologic methods of pain management with the mothers yet more than 50% of the respondents reported that they do not discuss each mother's birth plan with her.

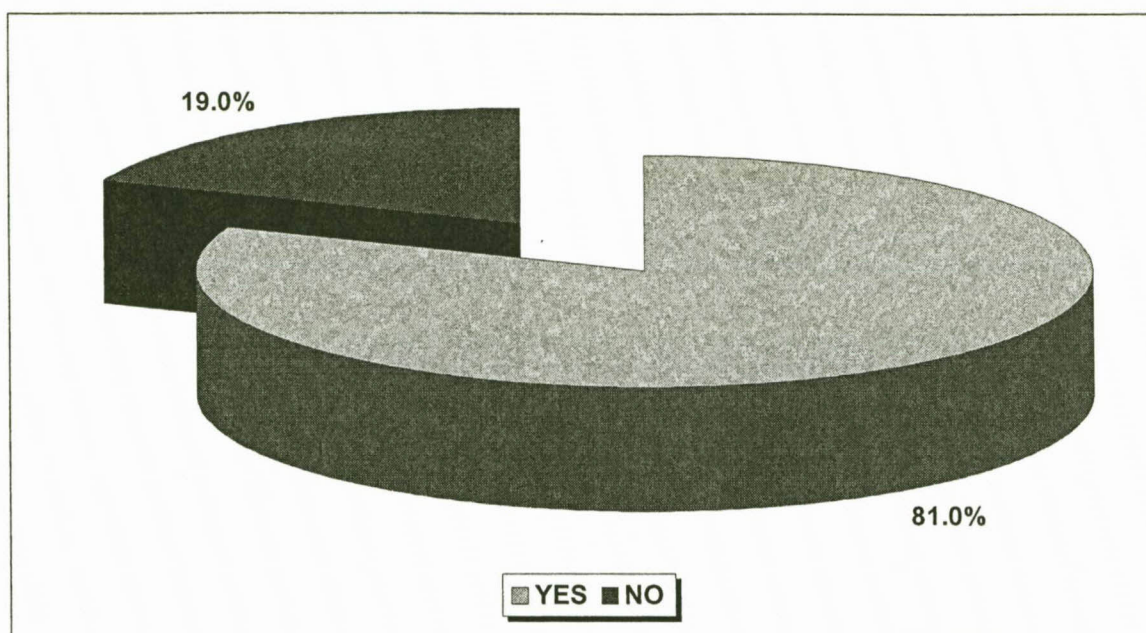


Figure 4.10: DISCUSSING NON-PHARMACOLOGIC METHODS OF PAIN MANAGEMENT WITH THE MOTHERS

Half (50%) of the respondents reported that they were unable to discuss non-pharmacologic methods to pain management with the mothers during the first stage of labor due to work overload. It is evident that the midwives devote most of their time attending to other tasks (nursing and non nursing), neglecting supportive care. Therefore, they fail to give the mothers information on simple techniques and comfort measures that they can use to reduce or alleviate the pain of labor. The midwives also miss the opportunity to know about the non pharmacologic methods that the mothers have learned antenatally, the ones they might have used with previous labors and the ones they would prefer to use to confront the pain they were experiencing.

Some of the respondents (20%) reported that they are not conversant with non-pharmacologic methods of pain management. This finding highlights knowledge deficit and consequently the need to strengthen the non-pharmacologic pain management of the midwifery curricula and continuing education. While 10% of the respondents indicated that discussing non pharmacologic pain management

with mothers is usually not done where they work, another 10% of the respondents reported that it is like they are supposed to help the mothers. Seemingly, midwives have lost their sense of responsibility and neglect their role of being there for the mother during labor. Thus mothers suffer at the prospect of getting on with the pain of labor without the midwives support and guidance.

Another ten percent of the respondents reported that it is useless to discuss non-pharmacologic pain management because the mothers will still complain of pain. This implies that midwives do not believe in non-pharmacologic pain management and devalue it. Therefore they do not use it during the first stage of labor. According to Moore (1997:71) and Chen et al. (2001: 180) midwives do not enable mothers use non-pharmacologic methods of pain management because they do not believe in them and devalue them as an aspect of nursing care.

4.3.2.12 *Allowing the mother to choose the methods of pain management*

The majority (72%) of the respondents indicated that they allowed mothers to choose the method(s) of pain management they preferred to use during the first stage of labor. It is implied that the midwives give the mothers the opportunity to use any method of pain management, including non pharmacologic. This finding is alarming since this study revealed that more than fifty percent of the midwives do not discuss the mothers' birth plans nor do they give them the opportunity to make informed decisions regarding non-pharmacologic pain relief. Some (28%) of the respondents reported that they do not allow the mothers to choose the method(s) of pain management they prefer to use (see table 4.9). It is evident that midwives make decisions for the mother regarding pain management. Thus, they render care to mothers without their informed consent.

Table 4.9: ALLOWING THE MOTHER TO CHOOSE THE METHODS OF PAIN MANAGEMENT (N = 43)

RESPONSE	FREQUENCY	PERCENTAGE %
Yes	31	72
No	12	28

4.3.2.13 *Allowing the mother to have support persons*

Most (61%) of the respondents reported that they do not allow mothers to have support persons during the first stage of labor (see figure 4.11). This implies that mothers depend solely on the midwives for support that is necessary to help them cope with labor pain. Consequently, mothers confront the pain they experience during the first stage of labor unsupported since the results of this study indicated that most of midwives do not remain with the mothers throughout the entire first stage of labor, making the use of non-pharmacologic methods of pain management difficult.

Only 39% of the respondents allow mothers to have support persons. It is evident that midwives use labor companionship minimally during the first stage of labor, making the use of non-pharmacologic methods of pain management difficult (or impossible) as the mothers need support to be able to apply almost all of these techniques. According to Hofmeyr (1999: 93) the continuous presence of a female support person is a low cost intervention for pain relief and one of the best documented "simple" techniques that decreases the level of pain experienced by mothers during labor. This aspect is therefore neglected and mothers do not enjoy this privilege.

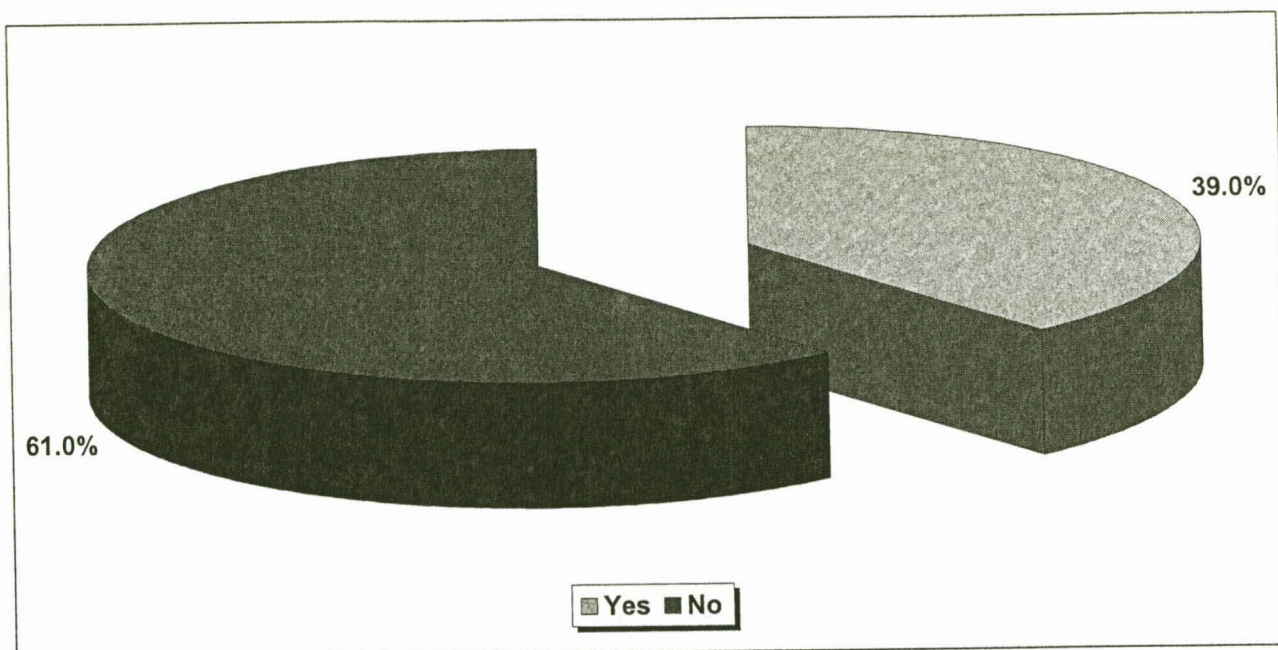


Figure 4.11: ALLOWING THE MOTHER TO HAVE SUPPORT PERSONS
(N = 54)

4.3.2.14 *Assisting the support person*

From those who allow a support person, 19 (90%) indicated that they assist the support person(s) with their role during the first stage of labor, while 2 (10%) of the respondents reported that they did not assist the support person. Assisting the support persons ensures guidance of the support persons on the use of different non-pharmacologic strategies of pain management and facilitates their role of being there for the mothers throughout the first stage of labor. According to May and Mahlmeister (1994: 503) the midwife's presence is absolutely essential to support the mother and her partner through the first stage of labor, particularly the transitional phase, due to the potential overwhelming pain during this phase.

4.3.2.15 Reasons for not allowing support persons

In traditional care, mothers are usually admitted to combined labor rooms (Janssen et al. 2001: 173). Many mothers are still allowed to approach their confinements in communal labor wards and open first stage rooms are still common. This privacy is not guaranteed, making it difficult to use various non-pharmacologic methods of pain management (Moore, 1997:73).

Figure 4.12 illustrates that the majority (67%) of the respondents reported that they do not allow support persons because of a lack of privacy while 17% of the respondents reported that their maternity wards lack enough space. These findings suggest that the rooms where the midwives render care to the mothers cannot accommodate each individual mother together with her support persons. Possibly these rooms are few in numbers, small in size, open or communal, thereby making the involvement of the support persons and the application of various non pharmacologic approaches to pain management difficult.

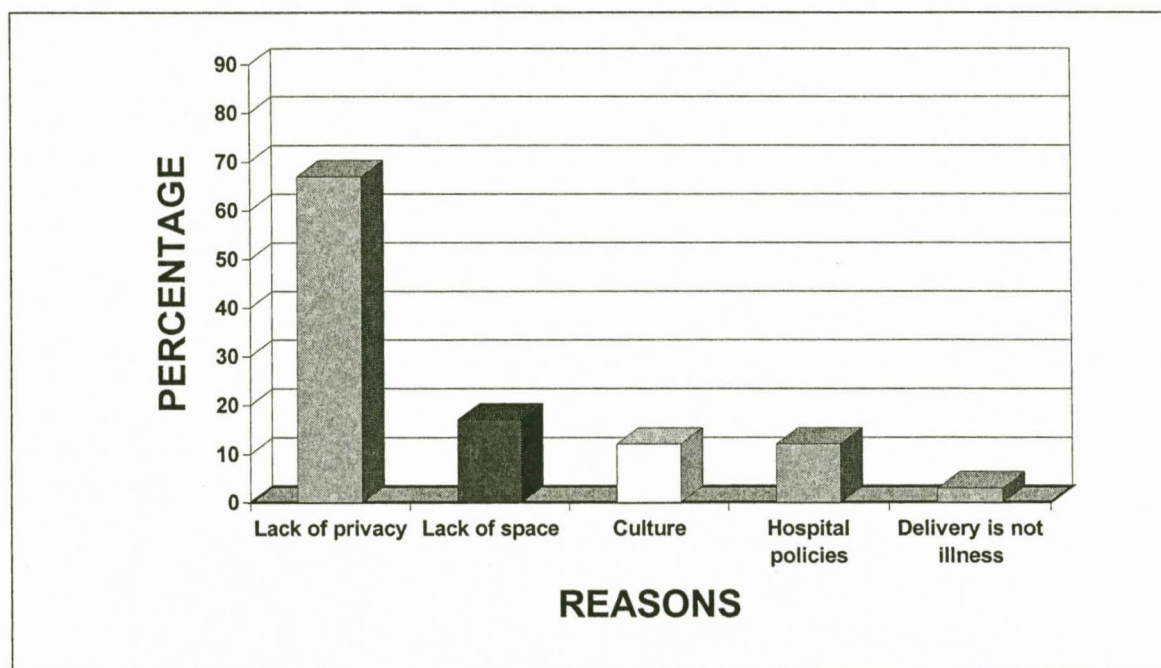


Figure 4.12: REASONS FOR NOT ALLOWING SUPPORT PERSONS (N - 33)

Some (12%) of the respondents reported that hospital policies do not allow support persons in the labor wards. It is evident that the hospital administrators, to some extent, contribute to the limited use of non-pharmacologic methods of pain management. It appears reasonable to suggest that hospital policies prohibit the presence of support persons mainly due to lack of space and privacy in the labor wards. This finding is consistent with that of a randomized trial conducted in an academic state hospital in Western Johannesburg in that hospital policies prohibited the presence of a labor companion mainly due to lack of space and privacy in the delivery rooms, which are necessary for effective use of non-pharmacologic methods of pain management (Nikodem et al. 1998: 11; Madi et al. 1997:7).

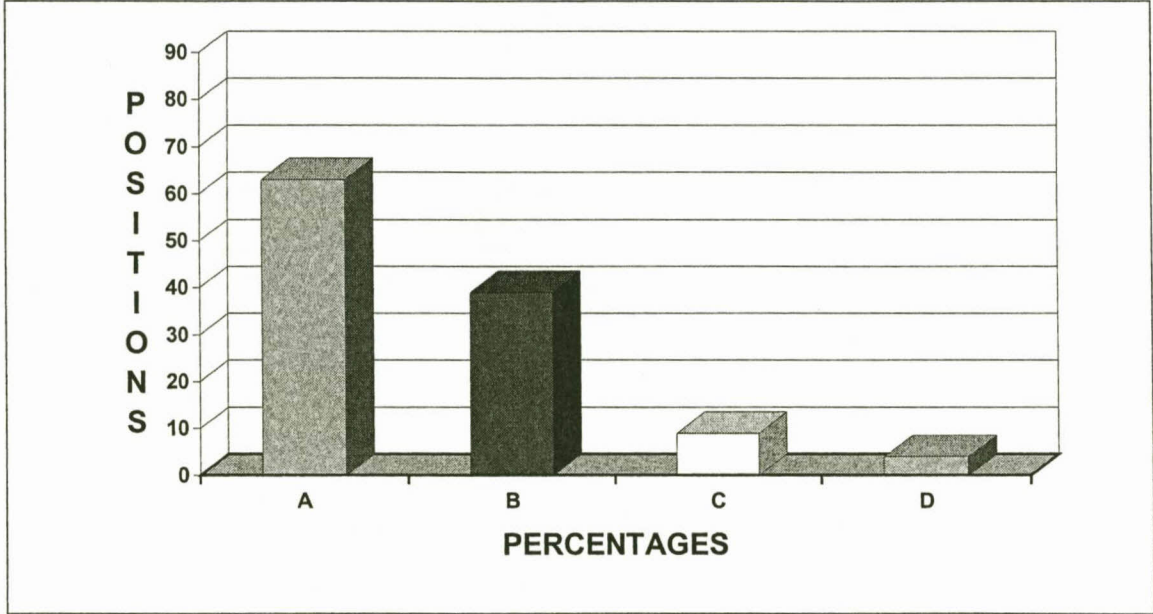
Twelve percent of the respondents indicated that culture does not allow the mothers to have support persons. Some (3%) of the respondents reported they do not allow support persons because delivery is not a illness. Even though Cingo (2001: 69) contend that two of the most important comfort aids during labor are the midwife and the mother's support person as they create the atmosphere the mother wants, the midwives disregard the importance of labor support since labor is not a illness.

4.3.2.16 *Positions the midwife prefers*

The majority of the respondents 34 (63%) indicated that they preferred that mothers should walk upright during the first stage of labor. This is to the advantage of the mothers since ambulation has been associated with less use of pain medication and greater maternal sense of control (Walsh, 2001: 250; Kritzinger, 2000: 33). Thirty nine percent of the respondents reported that they preferred the lateral position (see figure 4.13). It is evident that the midwives use the lateral position minimally yet it seems to be very acceptable to many mothers, especially those who are unable or do not desire to walk around (Sellers, 1997:

436). It is also associated with stronger but less frequent contractions, thus reducing the pain for the mothers (Walsh, 2001: 288).

Some (9%) of the respondents reported that they preferred the recumbent position. It is distressing that midwives preferred the recumbent position, which has been criticized for being unnatural, increasing fetal distress and causing greater pain for the mother (Walsh, 2001: 288). Only 2 (4%) of the respondents indicated that they preferred kneeling with hands and feet. It is apparent that kneeling with hands and feet is minimally used to enhance maternal comfort during the first stage of labor. According to Otte (1991: 91) adopting the all fours positions decreases severe labor pain, particularly pain from posterior positions.



- A = WALKING UPRIGHT
B = LATERAL POSITIONS
C = RECUMBENT POSITION
D = KNEELING WITH HANDS AND FEET

Figure 4.13: POSITIONS THAT MIDWIVES PREFER MOTHERS TO ADOPT DURING THE FIRST STAGE OF LABOR (N = 54).

4.3.2.17 *The person assisting the mother to adopt different positions during the first stage of labor*

Since positioning during labor is a major component of pain management, it is distressing to note that only 65% of the respondents indicated that midwives are the ones who assist mothers to adopt different positions during the first stage of labor (see table 4.10). It is evident that midwives do not offer adequate support to the mothers during the first stage of labor. Twenty two percent of the respondents reported that mothers are assisted by their support persons. The minority (6%) of the respondents indicated that doctors assist mothers to adopt different positions during the first stage of labor. This finding implies that labor support persons are involved to a lesser extent during the first stage. Probably the midwives do not avail themselves to both the mothers and their support persons.

The most striking finding is that 13 (24%) of the respondents reported that nobody assists the mothers to adopt the different positions during labor. This finding suggests that one out of five midwives do not use positioning to help the mothers to cope with the pain they experience during the first stage of labor. The need for further research on the use of positioning during labor and the identification of midwives support actions during the first stage of labor is highlighted. The midwives are the professionals who are responsible for providing care and support during the first stage of labor and the entire childbirth process, whether or not the mother has the support persons (McCrea et al. 1998: 176).

**Table 4.10: THE PERSON WHO ASSISTS THE MOTHER TO ADOPT
DIFFERENT POSITIONS (N = 54)**

PERSON ASSISTING	FREQUENCY	PERCENTAGE %
Midwife	35	65
Nobody	13	24
Support person	12	22
Doctor	3	6

4.3.2.18 *Allowing the mother to freely make noises*

The analysis of this item portrays that the majority (69%) of the respondents reported that they do not allow the mothers to freely make noises during the first stage of labor. It is apparent that midwives incapacitate mothers in the use of natural means to cope with the pain they experience during the first stage of labor. This finding is disturbing since some mothers feel that making sounds such as groaning, moaning or chanting repeated phrases help them cope with pain and do the work of labor (Ladewig et al. 1997: 429). Only 17 (31%) of the respondents reported that they allow mothers to freely make sounds (see figure 4.14). It is a minority of the midwives who enhance the role of making noises in pain management. According to Lowe (1996: 89 – 90) the sensitive midwife can help mothers by giving "permission" to make sounds and directing the laboring mother's efforts into low pitched or guttural sounds.

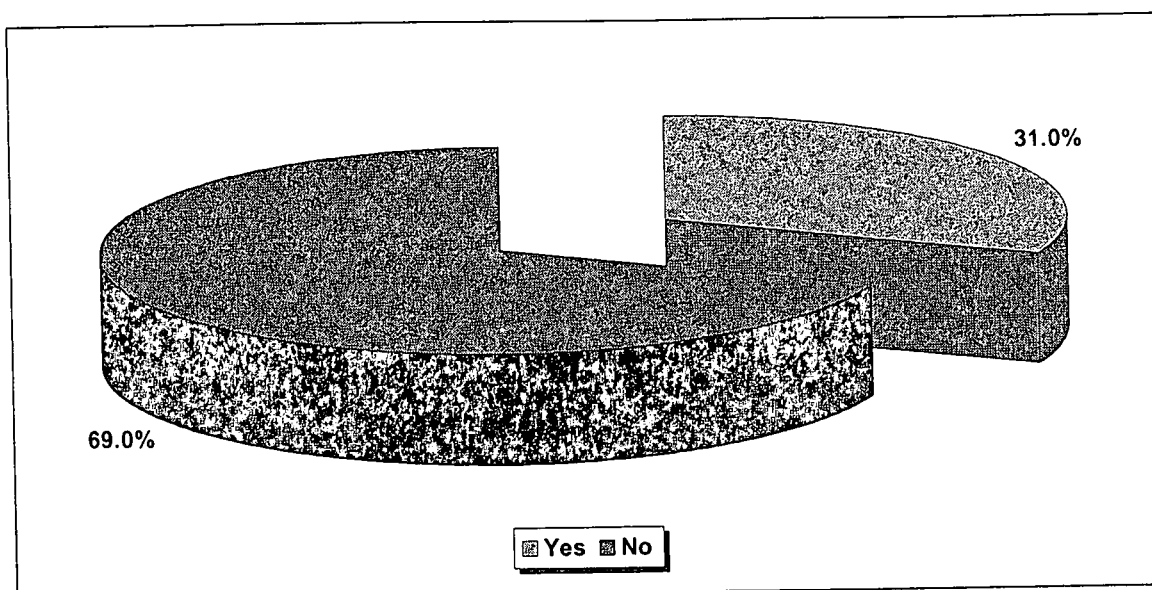


Figure 4.14: ALLOWING THE MOTHERS TO FREELY MAKE NOISES
(N = 54)

From the thirty seven respondents who reported that they do not allow the mothers to freely make noises, 19 (51%) of the respondents indicated that they do not allow mothers to freely make noises to avoid disturbing other mothers and patients. It is implied the labor settings are not conducive to the implementation of non-pharmacologic pain management.

Eleven percent of the respondents reported that culture does not allow mothers to make sounds. This finding suggests that midwives admire mothers who are quite during the first stage of labor. Some (24%) of the respondents indicated that making noises leads to maternal exhaustion while 8% of the respondents reported that mothers will not be able to follow instructions. Seemingly midwives confuse making noises with screaming. Five percent of the respondents indicated that the noises irritate and confuse the midwives. Based on these results, it is realistic to suggest the midwives have knowledge deficit regarding the role of making noises in labor pain management. Only 3% of the respondents indicated that pain is tolerable. It is evident that some of the midwives do not perceive the need for intervention to reduce or alleviate the pain of labor.

4.3.2.19 *Methods of applying heat to the mother's body*

The majority (69%) of the respondents indicated that they do not use any method of applying heat to the mothers body (see figure 4.15). This finding is problematic since applying heat to the mothers body is a fundamental nursing practice that can be used for pain relief during the first stage of labor and is readily available to the midwives (Nichol & Zwelling, 1997: 834). Only 17 (31%) of the respondents reported that they use the method(s) of applying heat to the mothers body during the first stage of labor. Based on these findings, it is reasonable to suggest that the use of heat applicable as a non-pharmacologic method of pain management is limited.

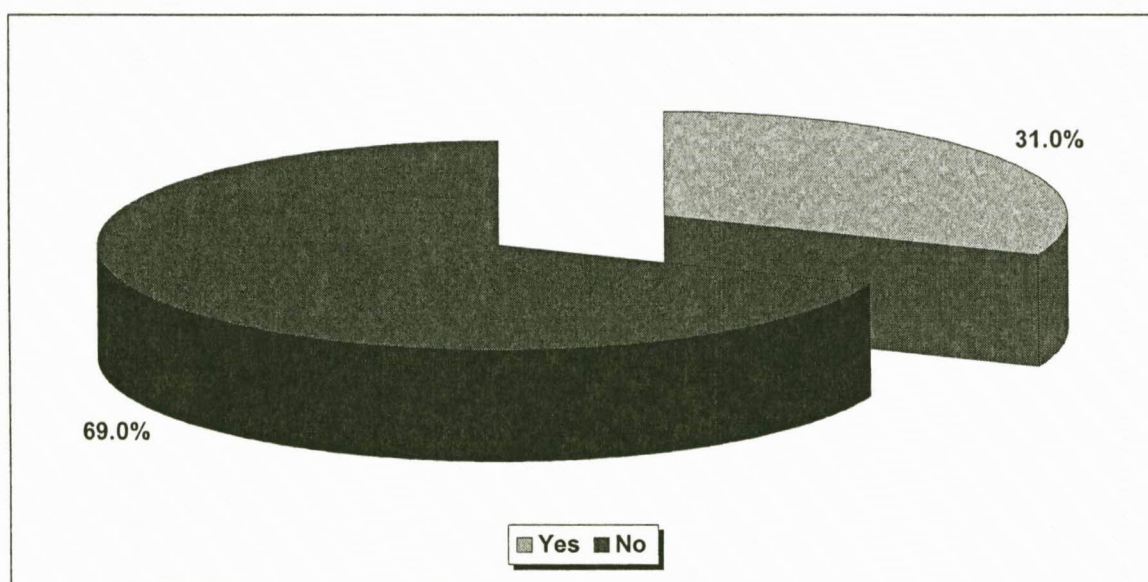


Figure 4:15: METHODS OF APPLYING HEAT TO THE MOTHER'S BODY
(N = 54)

Out of the seventeen respondents who reported that they use methods of applying heat to the mother's body, most (41%) of the respondents indicated that they use warm showers (see table 4.11). This implies that warm showers are used more than the other methods of heat application. Surprisingly, 35% of the respondents indicated that they use heaters to apply heat to the mother's body.

This finding implies that these midwives also do not apply heat to the mother's body and lack knowledge regarding the use of heat in labor pain management.

Twenty four percent of the respondents reported that they use warm towels while 2 (12%) indicated that they use immersion in warm water to apply heat to the mother's body during the first stage of labor. Based on these findings, inadequate use of heat application during the first stage of labor is evident.

Table 4.11: METHODS OF APPLYING HEAT TO THE MOTHER'S BODY DURING THE FIRST STAGE OF LABOR (N = 17).

METHOD	FREQUENCY	PERCENTAGE %
Warm showers	7	41
Heaters	6	35
Warm towels	4	24
Immersion in warm water	2	12

4.3.2.20 Massage techniques used by midwives during the first stage of labor

The majority 40 (74%) of the respondents indicated they use massage techniques during the first stage of labor (see table 4.12). This implies that massage techniques are widely used by the midwives during the first stage of labor. According to Moore (1997:50) massage techniques help to reduce the sensation of pain and are no less effective than commonly used pharmacologic analgesics such as pethidine. Twenty six percent of the respondents reported that they do not use any massage techniques. This finding is disturbing given the benefits of massage in labor. The study of Field et al (1997: 286) showed that massaged mothers reported a decrease in depressed mood, anxiety as well as pain.

Among those who use massage techniques 41% indicated that they use sacral pressure. According to Gorrie et al (1994: 367) sacral pressure is a variation that may help when the mother has back pain, which is usually most intense when the fetus is an occipital posterior position.

Table 4.12: MASSAGE TECHNIQUES USED BY MIDWIVES DURING THE FIRST STAGE OF LABOR N = 54

MASSAGE TECHNIQUE	FREQUENCY	PERCENTAGE %
Sacral pressure	22	41
Light rubbing of back, hands and feet	19	35
None	14	26
Effleurage	4	7
Counter pressure	3	6
Light & firm rubbing of the back	1	2

4.3.2.21 Using concentrated oils in conjunction with massage

All 54 (100%) respondents reported that they do not use concentrated oils in conjunction with massage during the first stage of labor. This is disturbing because there is a wide range of oils that are calming, dissipate stress and tension, relax and facilitate rest between contractions (Enkin et al. 1998: 253; Tiran, 1996: 17).

4.3.2.22 The use of reassuring touch

Forty one (76%) of the respondents indicated that they use reassuring touch while only 13 (24%) do not use reassuring touch (see figure 4.16). This implies that reassuring touch is greatly used by midwives in Lesotho. Reassuring touch

conveys to mothers a message of caring and being there (Enkin et al. 1998: 251). Midwives should make themselves available to the mothers. Since some mothers want to touch and to be touched during a painful experience, the midwives can just place a hand on the side of the bed within the mothers reach (Ladewig et al. 1997: 430).

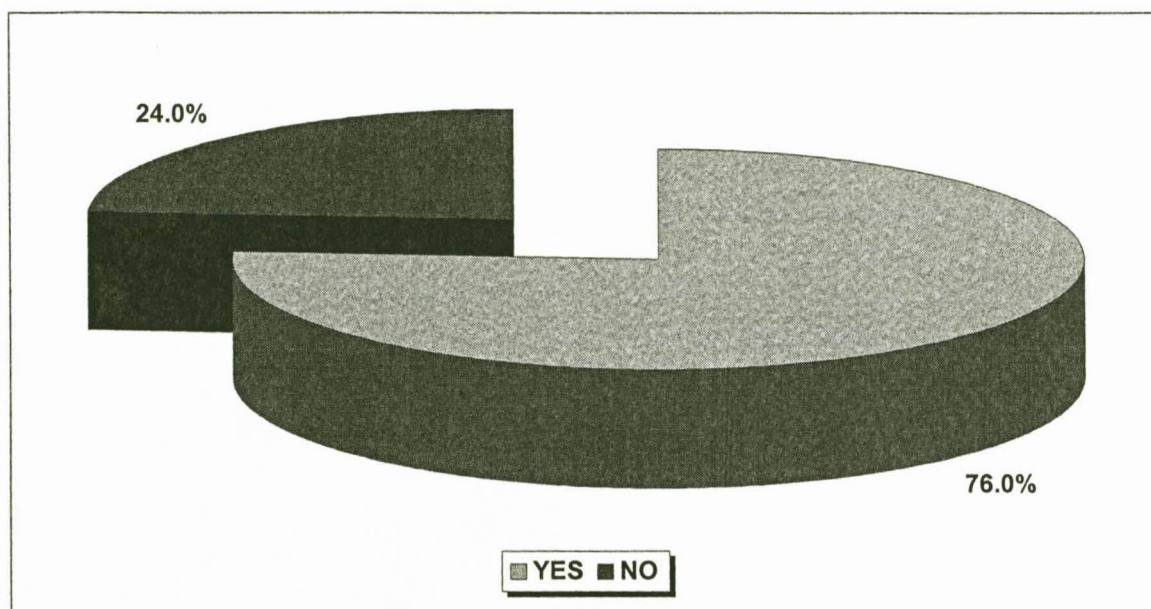


Figure 4:16: THE USE OF REASURING TOUCH

4.3.2.23 Breathing techniques

It is encouraging to note that 100% of the respondents indicated that they use some form of breathing to help mothers to cope with labor pain since all breathing techniques can be used readily by mothers and midwives to enhance the quality of the birth experience. These techniques are purported to increase relaxation, decrease pain and provide a means of focusing attention (Pugh et al. 1998: 241). It is however important that these techniques are used correctly.

4.3.2.24 *Mental stimulation techniques*

The majority 42 (78%) of the respondents indicated that they do not use mental stimulation techniques. Only 12 (22%) of the respondents use mental stimulation techniques (see figure 4.17). These findings illustrate that mental stimulation techniques are minimally used as non pharmacologic methods of pain management during the first stage of labor in the maternity wards of the government and Christian health Association of Lesotho hospitals.

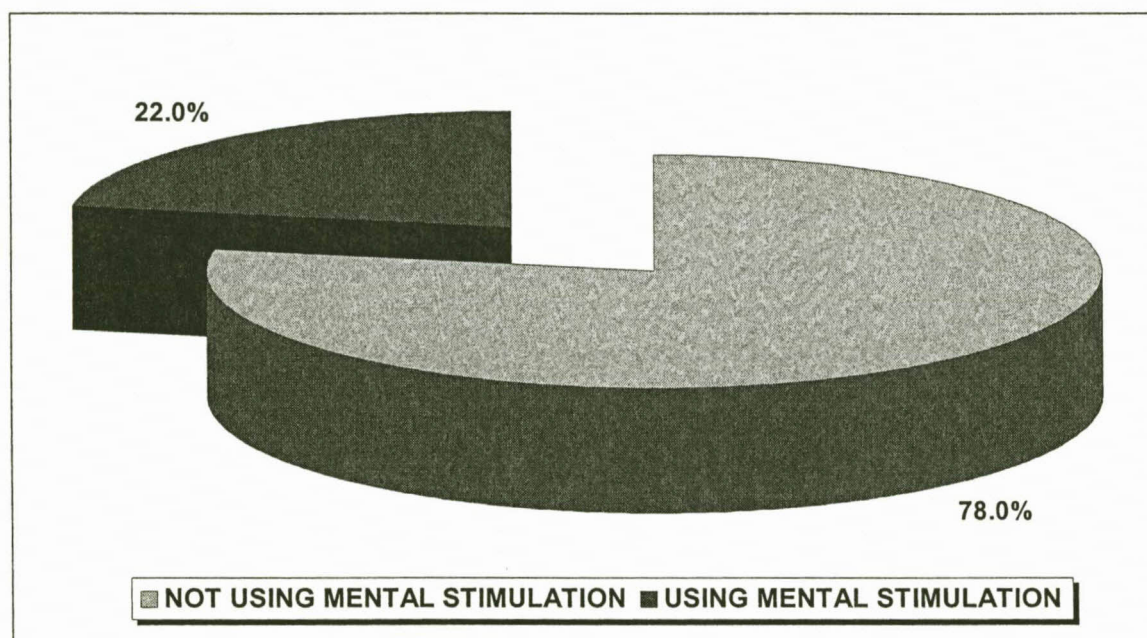


Figure 4.17: USE OF MENTAL STIMULATION TECHNIQUES (N = 54)

4.3.2.25 *The use of transcutaneous electric nerve stimulation (Tens)*

The majority 51 (94%) of the respondents indicated that they do not use TENS during the first stage of labor, while 6% of the respondents reported that they use TENS to help mothers to cope with labor pain (see figure 4.18). These findings demonstrate that the use of TENS as a non pharmacologic method of pain

management during the first stage of labor is very limited. The limited use of TENS is problematic since previous studies have indicated that application of TENS to the lower back significantly reduces back pain and thus the need for epidural and other analgesics (Petrie & Peck, 2000: 131).

Among the fifty one respondents who do not use TENS during the first of labor, 79% reported that TENS is not available in their units. This implies that unavailability of TENS is the main reason for its limited use as a non-pharmacologic method of pain management during the first stage. The unavailability of TENS in the labor wards may be due to the fact that the TENS units are obtained only by prescription and are usually distributed through the physical therapy department of a hospital (Nichol & Zwelling, 1997: 838).

On the other hand, 19% of the respondents indicated that they do not know what TENS is while 2% of the respondents stated that TENS is not practical to their situation. A lack of knowledge regarding the use of TENS, as a non-pharmacologic method of pain relief is evident among the midwives, warranting in-service training and strengthening of non-pharmacologic pain management component of the curricula for midwifery courses.

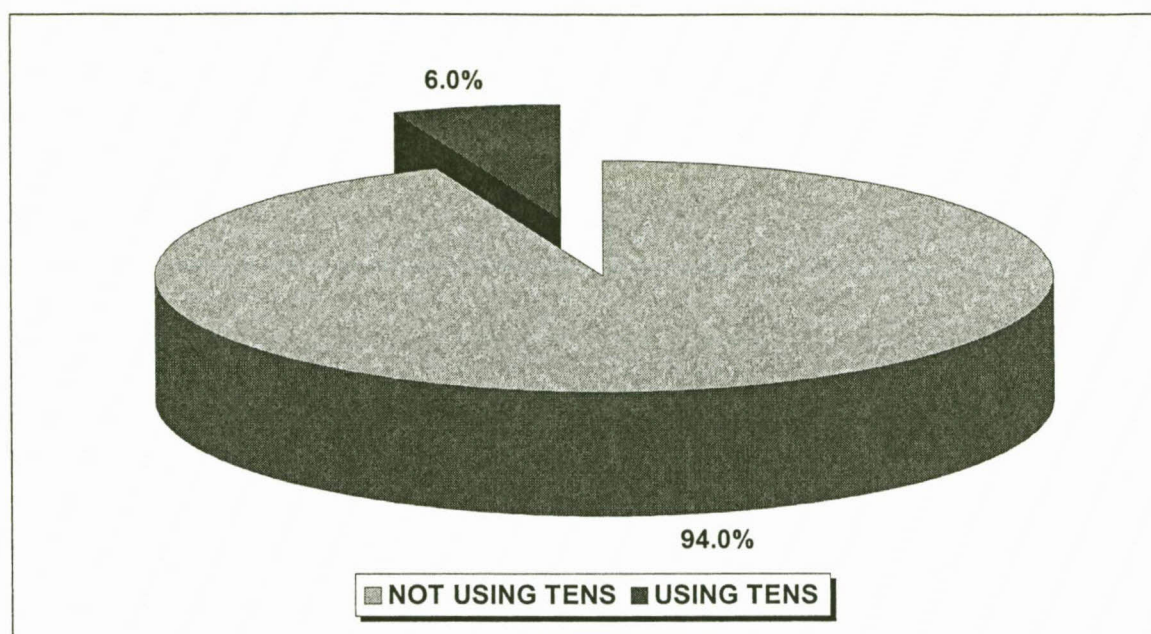


Figure 4.18: USE OF TENS (N = 54)

4.3.2.26 *Education on non-pharmacologic method of pain management*

It is good to note that 46 (85%) of the respondents indicated that they were taught non-pharmacologic methods of pain management, thus, it has been included in the curricula of midwifery training. The majority (91%) of the respondents reported that they were taught non-pharmacologic methods of pain management during basic midwifery training while 15% of the respondents were taught during advanced midwifery and neonatology training (see table 4.13). These findings demonstrate that non-pharmacologic methods of pain management are taught in both basic and post basic midwifery courses. Therefore it is important to investigate why they are not used by midwives to reduce or alleviate pain experienced by mothers during the first stage of labor.

Only 8 (15%) of the respondents reported that they were not taught non-pharmacologic methods of pain management. Probably these are the midwives

who obtained a certificate in midwifery, since they qualified long back. The need for in-service training is evident, seeing that none of the respondents indicated to have received any form of continuing education, even at symposia.

Table 4.13: EDUCATON ON NON-PHARMACOLOGIC METHODS OF PAIN MANAGEMENT (N = 49)

EDUCATION	FREQUENCY	PERCENTAGE %
Basic midwifery	42	91
Advanced Midwifery and Neonatology	7	15

4.3.3 COMFORT MEASURES

Table 4.14 portrays the results of the analysis of comfort measures rendered to mothers by midwives during the first stage of labor. The majority (69%) of the respondents indicated that they alter the brightness of lights in the labor rooms. Altering the brightness of lights sets the environment to be conducive to relaxation; thereby reducing the mothers pain perception (Weiss, 2000: 2). Fifty nine (59%) percent of the respondents reported that they adjust the labor rooms temperature and 52% give the mothers something to drink during the first stage of labor. Failure to give mothers something to drink increases the mothers' chances of being dehydrated, thereby increasing their perception of pain. According to (Cingo, 2001: 69) midwives must take special care to maintain energy levels and adequate hydration with juices and other clear fluids to avoid dehydration, which could increase the mother's perception of pain.

Some (30%) of the respondents indicated that they give mothers ice to suck, while 24% reported that they sponge the mother's face and 23% assist the mother with mouth washes. Only 7% of the respondents apply cold compress to the mother's lower back. These findings imply that midwives offer mothers very

limited support and thus play a minor role in the use of non-pharmacologic methods of pain management during the first stage of labor. According to Ladewig et al. (1997: 429) and Gorrie et al. (1994: 367), midwives should relieve minor discomfort by using simple nursing actions to help the mothers to use their coping mechanisms to deal with labor pain.

The analysis of the comfort measures in this study highlights the need for further research into the support offered by midwives to mothers during the first stage of labor.

Table 4.14: COMFORT MEASURES USED BY MIDWIVES DURING THE FIRST STAGE OF LABOR (N = 54)

COMFORT MEASURE	FREQUENCY	PERCENTAGE %
Sponging the mother's face	13	24
Cold compresses to the mother's lower back	4	7
Giving the mother something to drink	28	52
Assisting the mother with mouth washes	12	23
Altering the brightness of lights in the labor room	37	69
Adjusting the labor room's temperature	32	59
Giving mother ice to suck	16	30

4.3.4 COMMENTS

The respondents who participated in this study made some comments. Most of them felt that mothers must be taught non-pharmacologic methods of pain management during the antenatal period. Probably these midwives are not involved in the antenatal care of mothers but have realised that mothers go into the first stage of labor not knowing non-pharmacologic methods they can use to cope with labor pain. On the other hand, some midwives indicated that midwives should be taught non-pharmacologic methods of pain management during formal training and should be offered in-service education and short courses to update their knowledge. This implies that the midwifery curricula might be deficient in non-pharmacologic pain management. Midwives never attend short courses on the use of the methods during the first stage of labor.

Some of the midwives indicated that shortage of staff hampers them from using non-pharmacologic methods, though they are good. Other contended that these methods must be applied during the first stage of labor because they have fewer side effects or side effects and are less harmful to the mother and her baby. Therefore it is apparent that some of the midwives know about the non-pharmacologic methods of pain management but have problems implementing them during the first stage of labor. The midwives also indicated that support persons should be allowed to remain with the mothers during the first stage of labor. This implies that midwives appreciate the role of support persons in labor pain management.

4.4 CONCLUSION

Based on the results of this study, it is reasonable to suggest that though the midwives were taught non-pharmacologic methods of pain management, they do not adequately use these methods to help mothers to cope with the pain of labor. In this study, several factors have been identified, which include shortage of staff,

lack of privacy, lack of space in the labor wards, hospital policies that prohibit the presence of labor support persons in the labor wards, inadequate knowledge of the non pharmacologic methods of pain management and the fragmentation of the care rendered to mothers during pregnancy and labor.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

As the purpose of the study was to identify the non-pharmacologic methods of pain management used by the midwives and the factors that influence the use of these methods by the midwives during the first stage of labor, the importance of this chapter lies in the discussion of the conclusions and the making of the necessary recommendations.

5.2 CONCLUSIONS AND RECOMMENDATIONS

5.2.1 THE AGE OF THE MIDWIVES AND THE NUMBER OF CHILDREN THE MIDWIVES HAVE

5.2.1.1 Conclusion

Based on the finding that the respondents have the mean age of thirty-four years and that the majority (69%) has children, it is concluded that the midwives who render care to the mothers during the first stage of labor are young and most of them have personal experience of labor.

5.2.1.2 Implication for practice

The midwives' ages and personal experiences with labor pain may influence their evaluation and management of the laboring women's pain (McCrea et al. 1998: 179; Nichol & Zwelling, 1997: 856). It is evident that the midwives' ages and

personal experiences positively influenced the use of the non-pharmacologic methods because only ten percent of the respondents indicated that these methods are useless.

5.2.1.3 *Recommendation*

It is recommended that further research be conducted to determine the influence of the midwives' ages and parity on the use of non-pharmacologic methods of pain management during labor. This could be done by grouping the midwives based on their age groups and parity and observing how they use different non-pharmacologic methods during the first stage of labor.

5.2.2 *EDUCATION*

5.2.2.1 *Conclusion*

The midwives who render care to mothers during the first stage of labor possess a college diploma in midwifery, an advanced diploma in midwifery and neonatology and a certificate in midwifery as their highest professional qualifications in midwifery. Though they were taught non-pharmacologic methods of pain management during their midwifery training (basic and/or post basic), they do not use these methods adequately during the first stage of labor to help reduce or alleviate pain for the mothers.

5.2.2.2. *Implication for practice*

Education on non-pharmacologic methods of pain management should enable midwives to use these methods to help mothers to cope with pain they experience during labor.

5.2.2.3 *Recommendation*

It is recommended that midwives should keep abreast with new developments in the use of non-pharmacologic methods of pain management during labor. They could gain this information by attending short courses, symposia and workshops on non-pharmacologic pain management.

Institutions which offer midwifery education should review their curricula in order to identify any deficiencies in the component of non-pharmacologic pain management, and strengthen them when necessary. According to Brockopp et al. (1998: 266) inadequate education among health care providers is a major reason for ineffective management of labor pain. Often, only a minor portion of the education curricula is devoted to pain management.

5.2.3 YEARS OF MIDWIFERY EXPERIENCE

5.2.3.1 *Conclusion*

Based on the finding that most (80%) of the respondents have ten or less year of midwifery experience, it is concluded that midwives have enough midwifery experience that should enable them to implement the non-pharmacologic methods of pain management during the first stage of labor.

5.2.3.2 *Implication for practice*

Since only 20% of the midwives have more than ten years of midwifery experience, midwifery experience favors the use of non-pharmacologic methods of pain management. According to Kardong-Edgren (2001: 373) experienced midwives are resistant to change or to implement evidence based practice and

usually influence new graduates and student midwives to follow the same pattern.

5.2.3.2 *Recommendation*

It is recommended that further research be conducted to determine the influence of midwifery experience on the use of non-pharmacologic methods of pain management during labor.

5.2.4 MEETING THE MOTHER FOR THE FIRST TIME

5.2.4.1 *Conclusion*

Most of the midwives (73%) meet the mother for the first time in the prenatal clinic but are not involved in childbirth preparation classes. There are some (67%) midwives who meet the mother for the first time in the labor ward.

5.2.4.2 *Implication for practice*

The finding that most of the midwives meet the mother for the first time during labor implies that mothers are cared for by midwives who are strangers. According to Moore (1997: 55) being cared for in labor, by a midwife whom the mother knows may be reassuring and thus reduce her need for pharmacologic pain management.

The midwives also do not utilise the opportunity to teach mothers non-pharmacologic methods of pain management that they can use during the first stage of labor since they are not involved in childbirth preparation classes.

5.2.4.3 *Recommendation*

The researcher is of the opinion that the named midwife concept and the development of the midwife-led units could allow the midwives to know their clients before labor and to offer childbirth preparation classes. Thus, the researcher approves the suggestion by McCrea & Wright (1999: 883) that a system of continuity, where one midwife or a small group of midwives work with the mother throughout the entire childbirth process should be adopted as it fosters and encourages personal control in pain relief.

5.2.5 POLICY PERTAINING TO PAIN MANAGEMENT

5.2.5.1 *Conclusion*

Based on the finding that most maternity wards do not have policies pertaining to pain management, it is concluded that hospital policies influence the use of non-pharmacologic methods of pain management minimally. Therefore the midwives have all the liberty to use these methods when providing care to mothers during the first stage.

5.2.5.2 *Implication for practice*

The minimal influence of hospital policies on the use of non-pharmacologic methods of pain management by midwives during the first stage of labor favors the use of these methods. According to Nichol & Zwelling (1997: 857) many of the non-pharmacologic methods of pain relief are non-invasive, relate closely to many common nursing comfort and support strategies and do not require a physician's order. Therefore the midwives should use them as the first step in their interventions to help the mothers manage labor pain.

5.2.5.3 *Recommendation*

It is recommended that the managers of the maternity wards and the midwives should formulate policies that maximise the use of non-pharmacologic methods of pain management during the first stage of labor.

5.2.6 THE MIDWIFE-MOTHER RATIO

5.2.6.1 *Conclusion*

It is concluded that most of the midwives provide care to three or more mothers during the first stage.

5.2.6.2 *Implication for practice*

When the midwife renders care to three or more mothers during the first stage of labor, it becomes very difficult for her to provide continuous support to each individual mother. Thus, mothers might be left on their own.

5.2.6.3 *Recommendation*

Because personal attention which is given to the mother is the most important aspect of dealing with labor pain, it is recommended that the maternity wards should adopt more flexible methods of staffing and scheduling that will permit the staff census to match closely the patient census. Like Booyens (1997: 237) the researcher also is of the opinion that the combined method of assigning staff to patient care should be adopted since it allows individualization of each mother and has proved to be the most effective approach where staff shortages exist.

5.2.7 THE PLACE OF RENDERING CARE TO MOTHERS

5.2.7.1 Conclusion

The place of rendering care to mothers during the first stage of labor differs in the maternity wards. It is assumed that mothers do not remain in the same room, under care of the same midwife (or midwives) throughout labor. It is apparent that midwives do not provide care to mothers in single rooms. As a result, privacy and adequate space are not guaranteed.

5.2.7.2 Implication for practice

It is highly unlikely that delivery rooms, admission rooms and antenatal wards could be labor settings that are conducive to the use of different non-pharmacologic methods of pain management. Sellers (1997: 430) argues that machines in the care settings are of no comfort to the mother in labor, instead they actually build up feelings of fear that intensify the pain for the mother.

The use of non-pharmacologic methods of pain management, including different relaxation techniques and involvement of labor support persons is hampered. In the absence of continuity in care and caregiver, midwives would not implement non-pharmacologic pain management effectively.

5.2.7.3 Recommendation

The researcher approves the suggestion by Janssen et al. (2001: 173) that each mother and her support persons should be admitted to a single room where they can remain together throughout the entire childbirth process. This single room should resemble a "home" as much as possible, with a normal bed, easy chairs and home-type furnishing.

The midwives should motivate for establishment of single birthing rooms or single first stage rooms in order to maximise the use of non-pharmacologic methods of pain management during the first stage.

5.2.8 THE AVERAGE LENGTH OF TIME SPENT WITH THE MOTHER

5.2.8.1 Conclusion

When the midwives spend an average of five hours with the mother during the first stage of labor, it is reasonable to conclude that most midwives do not remain with the mothers throughout the entire first stage of labor, particularly because the first stage is the longest stage of labor.

5.2.8.2 Implication for practice

Midwives fail to provide consistent, continuous support to mothers during the first stage of labor, and thus limit the use of non-pharmacologic methods of pain management.

5.2.8.3 Recommendation

Midwives should make every effort to ensure that all laboring mothers receive support, not only from those close to them but also from the midwives themselves. Since time is one of the midwife's most important resource, maximizing the use of that resource is essential if the care is to benefit the mothers and their babies (Gagnon & Waghorn, 1996: 6).

According to Miltner (2001: 498) and Hodnett 2001: 4) this can be achieved by altering the current work activities of the midwives such that they are able to

spend less time on ineffective activities, and more time providing supportive care to mothers, which incorporates the use of non pharmacologic methods of pain management.

5.2.9 DISCUSSING THE MOTHERS' PREVIOUS BIRTH EXPERIENCES AND BIRTH PLANS

5.2.9.1 *Conclusion*

Midwives who render care to the mothers during the first stage of labor in most of the maternity wards do not discuss with the mothers, their previous birth experiences and their birth plans mainly due to shortage of staff. Thus, they deny the mothers the opportunity to make decisions regarding their care.

5.2.9.2 *Implication for practice*

Without discussing with each mother her previous birth experiences and her birth plan, the midwives cannot render individualized care that could meet the mother's personal needs for pain relief. According to Simkin (2000: 225) discussing with the mothers their previous birth experiences allows the midwives to identify the non-pharmacologic methods the mothers used previously and to identify those mothers for whom labor pain has been traumatic and help them to process and resolve the traumatic aspects of pain.

5.2.9.3 *Recommendation*

Since care planning forms a reasonable basis for care giving activities, information on the importance of birth plans should be disseminated to the midwives by means of refresher courses and symposia. The researcher approaches the suggestion by McCrea et al. (2000: 498) that coordination of maternity services from pregnancy, throughout labor and delivery should replace the fragmented system of care currently in place so that midwives get to know their clients better and work with them in care planning. Moreover, this kind of approach ensures that care is planned to meet the needs of individual mothers rather than adopting a blanket approach.

5.2.10 METHODS USED TO ASSESS THE MOTHER'S NEEDS FOR PAIN RELIEF

5.2.10.1 *Conclusion*

The midwives determine the mother's needs for pain relief during labor mainly by observing the mother's behaviours. This means that the midwives make decisions for the mothers regarding pain relief, without taking the mothers' personal preferences for pain relief into consideration.

5.2.10.2 *Implication for practice*

The care rendered by midwives to mothers is not woman-centred; as such it cannot meet the mothers' needs and expectations for pain relief.

5.2.10.3 Recommendation

It is recommended that both the midwives and the mothers should be involved in birth planning, which should start before labor. According to Moore (1997: 60) it is more appropriate to assess a mother's need for pain relief in labor through the use of an individual birth, which has been discussed with the midwife she knows.

5.2.11 NON-PHARMACOLOGIC METHODS OF PAIN MANAGEMENT

5.2.11.1 Conclusion

Although the midwives discuss the non-pharmacologic methods of pain management with the mothers, they do not adequately use these methods to help mothers cope with the pain they experience during the first stage of labor. The involvement of labor support persons during the first stage of labor is quite minimal mainly due to lack of space and privacy in the different labor settings.

5.2.11.2 Implication for practice

Mothers often confront labor pain unsupported and thus experience distress and anxiety at the prospect of laboring alone. The inadequate use of non-pharmacologic methods of pain management limits the options of pain management methods from which the mothers could choose. It also unnecessarily deprives the mothers of the very basic comfort measures that decrease each mother's perception of pain and the use of analgesia.

5.2.11.3 Recommendation

The midwives should offer a comprehensive, client-centered service where every mother is cared for by a group of midwives throughout the entire childbirth process to allow teaching and practice of the different non-pharmacologic methods. The midwives should spend more time providing supportive care to mothers and less time on non-supportive care. They should motivate for establishment of single first stage rooms or birthing rooms where each mother can remain with her support persons throughout labor. Further investigation to evaluate the use of each non-pharmacologic method of pain management by the midwives is recommended.

5.2.12 COMFORT MEASURES

5.2.12.1 Conclusion

It is concluded that the use of comfort measures by the midwives during the first stage of labor to help the mothers to handle labor pain is very inadequate.

5.2.12.2 Implication for practice

Promoting the expectant mother's personal comfort helps her focus on pain management techniques during labor (Gorrie et al. 1994: 367). If midwives do not render comfort measures to mothers during the first stage of labor, they limit the mother's ability to use different non-pharmacologic methods of pain management. Thus, mothers suffer pain unnecessarily. According to May & Mahlmeister (1994: 485) contend that a major responsibility of the midwife is promoting comfort and using non-pharmacologic techniques to minimize pain for the mothers.

5.2.12.3 Recommendation

It is recommended that the managers of the maternity wards should implement quality assurance programs (or strengthen the existing ones if they have them) to make sure that mothers receive quality care from the midwives, since no reason exist for the inadequate use of comfort measures by midwives during the first stage of labor. According to Booyens (1999: 302) and Swansburg (1993: 384) quality assurance programs are essential to assuring that the quality of care is maintained, and indeed, that quality care is delivered.

Further investigation to identify the supportive actions of the midwives during labor is encouraged.

5.3 LIMITATIONS

- Data source triangulations was not used in this study as the data was obtained from the midwives who work in the maternity wards only. The midwives who work in the filter clinics which also conduct deliveries, student midwives and the mothers themselves were not included in the study.
- Method triangulation was not used in this study to address the research problem. The questionnaire was the only data-collecting instrument used, instead of using other data collecting instruments such as observation and interviews.

5.4 CONCLUSION

In this chapter, the limitations of the study were highlighted and the conclusions were discussed. In the light of the findings and the conclusions made, recommendations were drawn regarding the use of non-pharmacologic methods of pain management.

SUMMARY

Many of the non-pharmacologic methods of pain management are closely related to many common nursing comfort and support strategies and may be potentially as effective as narcotics in providing adequate pain relief to a well supported mother who is experiencing a reasonably normal labor. There is ample opportunity for midwives to use non-pharmacologic methods and discover the best modifications for their use during labor since they are the professionals responsible for providing care and support throughout the entire childbirth process. It is also necessary for the midwives and the expectant parents to explore various strategies of managing the pain of labor; in order that informed choices can be made regarding the desired pain relief measures. However, there is a scarcity of literature dealing with exploration and evaluation of the use of these methods by midwives during labor and therefore, additional research is needed.

The purpose of this study was to determine the use of non-pharmacologic methods of pain management by the midwives during the first stage of labor. The research design was non-experimental and of a descriptive nature. The survey method was used to obtain the necessary data. The data was obtained by the use of a structured questionnaire which was completed by the midwives working in the maternity wards of the Christian Hospital Association of Lesotho and government hospitals in Lesotho. All data was analysed on a nominal descriptive level.

According to the results, the midwives indicated that they were taught non-pharmacologic methods of pain management during basic and advanced midwifery training however, they expressed that they inadequately use these methods during the first stage of labor due to shortage of staff, lack of privacy and space, a high midwife-mother ratio, culture and hospital policies. In the light of these findings, the recommendations were made for maximizing the use of

non-pharmacologic methods by midwives during the first stage of labor. Further research in the use of different non-pharmacologic methods was also recommended.

OPSOMMING

Heelwat van die nie-farmakologiese metodes vir pynbeheer is naby verwant aan baie algemene gerusstellende en ondersteunende verplegingstrategieë en kan potensieel net so effektief as narkotikums wees in die verskaffing van voldoende pynverligting aan 'n goedondersteunde moeder wat 'n relatief normale bevalling ondervind. Daar is ruim geleentheid vir vroedvroue om nie-farmakologiese metodes te gebruik en om die beste modifikasies vir die gebruik daarvan te ontdek, aangesien hulle die professionele persone is wat verantwoordelik is vir die voorsiening van sorg en ondersteuning gedurende die hele geboorteproses. Dit is ook nodig dat die vroedvroue en verwagte ouers die verskeie strategieë vir die vermindering en beheer van pyn tydens die kraamproses ondersoek om sodoende ingeligte besluite te kan neem met betrekking tot die gewenste pynverligtingsmetodes. Daar is egter 'n tekort aan literatuur wat handel oor die ondersoek en evaluering van die gebruik van hierdie metodes deur vroedvroue gedurende die kraamproses, en derhalwe is bykomstige navorsing nodig.

Die doel van hierdie studie was om die gebruik van nie-farmakologiese metodes van pynbeheer deur vroedvroue gedurende die eerste stadium van kraam te bepaal. Die navorsingsontwerp was nie-eksperimenteel en van 'n beskrywende aard. Die ondersoekmetode is gebruik om die nodige data te bekom. Die data is bekom deur die gebruik van 'n gestruktureerde vraelys wat deur vroedvroue werkzaam by die kraamsale in die *Christian Hospital Association* in Lesotho en staatshospitale in Lesotho voltooi is. Alle data is op 'n nominale beskrywende vlak geanaliseer.

Volgens die resultate het die vroedvroue aangedui dat hulle onderrig ontvang het in nie-farmakologiese pynbeheermetodes gedurende basiese en gevorderde verloskunde-opleiding. Hulle het aangedui dat hulle die nie-farmakologiese pynbeheermetodes nie voldoende tydens die eerste stadium van kraam gebruik nie weens faktore wat 'n tekort aan personeel, gebrek aan privaatheid en ruimte,

'n hoë vroedvrou-moeder verhouding, kultuur en hospitaalbeleid insluit. In die lig van hierdie bevindinge is aanbeveel dat die gebruik van nie-farmakologiese metodes deur vroedvroue tydens die eerste stadium van kraam gemaksimaliseer moet word. Verdere navorsing oor die gebruik van verskillende nie-farmakologiese metodes en die doeltreffendheid daarvan vir die vermindering of verligting van kraampyne is ook aanbeveel.

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ANNEXURE A

Dear midwife

I am a Masters degree student studying the use of non-pharmacologic methods of pain management by midwives during the first stage of labor. Although the study may not benefit you directly, it provides information that might lead to improvement of the quality of health care rendered to mothers during the first stage of labour, thus optimising childbirth outcomes and maternal-neonatal health.

The study and its procedures have been approved by the Ethics Committee of the Faculty of Health Sciences of the University of the Free State.

Permission to conduct the study has been granted by the authorities of the hospitals involved in the study. The study procedures involve responding to a questionnaire, which will take approximately fifteen minutes. You are free to ask any questions about the study or being a subject and can call me at 083 392 4806 at all times.

Your participation in the study is voluntary. You are under no obligation to participate. The study data will be coded so that it will not be linked to your name. Your identity will not be revealed while the study is being conducted or when reported or published. The raw data will be stored in a secure place and will not be shared with any other person without your permission.

Your participation will be greatly appreciated.

Yours sincerely

M. Moru (Mrs.)

MIDWIFE'S SIGNATURE

DATE

For office use only

			1 – 3
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Instructions

The questionnaire consists of three sections: Section A refers to biographic information, Section B focuses on non-pharmacologic methods of pain management while Section C focuses on comfort measures used by midwives during the first stage of labor.

Please complete the questionnaire in full. Mark your choice with a cross (X) if relevant or write the answer in the space provided. If the question is not applicable, write N/A next to the question.

SECTION A

Biographic information

A. How old are you?

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		4 – 5
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B. Do you have children?

Yes	1
No	2

	6
--	---

C. If Yes, how many children do you have?

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	7
--	---

D. What is your highest professional qualification?

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		8 – 9
--	--	-------

E. Where did you obtain your professional qualification?

College	1
University	2
Other, specify	3

	10
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F. Where do you work?

CHAL hospital	1
Government hospital	2

	11
--	----

G. How long have you been working in the labor ward?
_____ years

		12 – 13
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SECTION B**The use of non-pharmacologic methods of pain management by midwives during the first stage of labor**

1. Where do you meet the mother for the first time?

Labor ward	1
Antenatal clinic	2
Birth preparation classes	3
Other, specify	4

 14

2. Is there a policy pertaining to pain management during the first stage of labor in the maternity ward?

Yes	1
No	2

 15

3. What is the midwife: mother ratio during the first stage of labor

1 : 1	1
1 : 2	2
Other, specify	3

 16

4. How do you refer to the mother during the first stage of labor?

By her name	1
Patient	2
Other, specify	3

 17

5. Where do you render care to the mother during the first stage of labor?

Antenatal ward	1
Open first stage rooms	2
Other, specify	3

 18 19 20

6. What is the average length of time you spend with the mother during the first stage of labor?

_____ hours

 21 – 22

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7. Do you discuss with the mother her previous birth experience(s)?

Sometimes	1
Always	2
Never	3

☐ 23

8. Do you discuss the mother's birth pain with her during the first stage of labor

Yes	1
No	2

☐ 24

9. If **No**, what are the reason(s) for not discussing the birth plan with her?

☐ ☐ 25- 26
☐ ☐ 27 - 28
☐ ☐ 29 - 30

10. Do you discuss with the mother the non-pharmacologic methods of pain management that she can use during the first stage of labor?

Yes	1
No	2

☐ 31

11. If **No**, what are the reason(s) for not discussing the non-pharmacologic methods of pain management?

☐ ☐ 32 - 33
☐ ☐ 34 - 35

12. If **Yes**, do you allow the mother to choose for herself the methods of pain management she prefers to use during the first stage of labor?

Yes	1
No	2

☐ 36

13. Do you allow the mother to have support person(s) during the first stage of labor?

Yes	1
No	2

☐ 37

14. If **Yes**, do you assist the support person(s) with her or her role?

Yes	1
No	2

☐ 38

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15. If **No**, what are the reason(s) for not allowing her to have support person(s)

		39 – 40
		41 – 42
		43 – 44

16. Which of the following positions do you prefer the mother to adopt during the first stage of labor?

Recumbent	1
Walking upright	2
Kneeling with hands and feet	3
Squatting	4
Other, specify	5

	45
	46
	47
	48
	49

17. Who assists the mother to adopt the position(s) she finds comfortable?

Support person(s)	1
Midwife	2
Other, specify	3

		50 – 51
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18. Do you allow the mother to freely make noise during the first stage of labor?

Yes`	1
No	2

	52
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19. If **No**, what are the reason(s) for not allowing her to make noise during the first stage of labor?

		53 – 54
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20. Do you apply heat to the mother's body during the first stage of labor?

Yes	1
No	2

	55
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21. If **Yes**, which method(s) of heat application do you use?

Immersion in warm water	1
Warm shower	2
Warm compresses/towels	3
Other, specify	4

	56
	57
	58
	59

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22. Do you apply ice to the women's lower back during the first stage of labor?

Yes	1
No	2

☐ 60

23. Which massage technique(s) do you use during the first stage of labor?

Sacral pressure	1
Effleurage	2
Light rubbing of back, hands and feet	3
Other, specify	4
Not using massage technique	5

☐ 61
☐ 62
☐ 63
☐ 64
☐ 65

24. Do you use concentrated oils in conjunction with massage during the first stage of labor?

Yes	1
No	2

☐ 66

25. Do you use reassuring touch during the first stage of labor?

Yes	1
No	2

☐ 67

26. Which breathing techniques do you use with the mother during the first stage of labor?

Cleansing breath	1
Slow paced breathing	2
Modified paced breathing	3
Pant, pant, blow	4
Other, specify	5
Not using breathing techniques	6

☐ 68
☐ 69
☐ 70
☐ 71
☐ 72
☐ 73

27. Which mental stimulation technique(s) do you assist the mother with during the first stage of labor?

Imagery	1
Focal point	2
Meditation	3
Music	4
Other, specify	5

☐ 74
☐ 75
☐ 76
☐ 77
☐ 78

28. If you use music, do you allow the mother to bring the music of her choice?

Yes	1
No	2

☐ 79

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29. Do you use transcutaneous electric nerve stimulation (TENS) during the first stage of labor?

Yes	1
No	2

☐ 80

30. If **No**, what are the reason(s) for not using TENS during the first stage of labor?

☐ ☐ 1 - 2
☐ ☐ 3 - 4

31. Were you taught non-pharmacologic methods of pain management?

Yes	1
No	2

☐ 5

32. If **Yes**, when was it?

Basic midwifery training	1
Advanced midwifery training	2
Other, specify	3

☐ 6
☐ 7
☐ 8

SECTION C

Comfort measures

33. Do you sponge the mother's face with a cool face cloth during the first stage of labor?

Yes	1
No	2

☐ 9

34. Do you apply cold compresses to the mother's lower back during the first stage of labor?

Yes	1
No	2

☐ 10

35. Do you offer the mother ice to suck during the first stage of labor?

Yes	1
No	2

☐ 11

36. Do you offer the mother something to drink during the first stage of labor?

Yes	1
No	2

☐ 12

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37. Do you assist the mother with mouth washes during the first stage of labor?

Yes	1
No	2

☐ 13

38. Do you alter the brightness of lights in the labor room according to each mother's personal preference?

Yes	1
No	2

☐ 14

39. Do you adjust the labor rooms temperature according to each mother's personal preference?

Yes	1
No	2

☐ 15

40. Write down any comments that you would like to make

<input type="checkbox"/>	<input type="checkbox"/>	16 – 17
<input type="checkbox"/>	<input type="checkbox"/>	18 – 19

UNIVERSITY OF THE FREE STATE



Office of the Director: Administration
Faculty of Health Sciences

339 BLOEMFONTEIN 9300

(051) 405-3013 / 401-2847

Enquiries

Mrs G Niemand

REPUBLIC OF SOUTH AFRICA

TELEFAX (051) 444-3103 SA

Tel 4053004

28th November 2001

MS MM MORU
SCHOOL OF NURSING
UNIVERSITY OF THE FREE STATE

Dear Ms Moru

ETOVS NR 219/01

RESEARCHER: MS MM MORU

PROJECT TITLE: THE USE OF NON-PHARMACOLOGIC METHODS OF PAIN MANAGEMENT BY
MIDWIVES DURING THE FIRST STAGE OF LABOUR IN LESOTHO.

You are hereby informed that during their meeting held on the 27th November 2001 the Ethics Committee approved the abovementioned project.

Your attention is kindly drawn to the following:

- a) A progress report be presented not later than one year after approval of the project
- b) That all extensions, amendments, serious adverse events, termination of a study etc have to be reported to the Ethics Committee.

Will you please quote the Etovs number as indicated above in subsequent correspondence, reports and enquiries.

Yours faithfully

For DIRECTOR: MEDICINE ADMINISTRATION

ANNEXURE C

P O Box 4298
Maseru 104
Lesotho

10 October 2001

**The Director General of
Health Services
Ministry of Health and Social
Welfare
P O Box 514
Maseru**

Dear Sir/madam

PERMISSION TO CONDUCT RESEARCH

I am currently pursuing a Masters degree in Nursing (M.Soc.Sc). May I kindly request permission to conduct a study in the maternity ward of the Government hospitals in Lesotho. The study is on the use of non-pharmacologic methods of pain management by midwives during the first stage of labor. This study is done in fulfillment of the abovementioned degree.

The study is aimed at identifying non-pharmacologic methods of pain management that midwives use to help mothers to cope with the pain they experience during the first stage of labor. Quantitative data will be collected using questionnaires. Statistical analysis will be done with the help from the Biostatistic Department of the University of the Free State. Anonymity will be ensured by coding data and each respondents identify will not be revealed while the study is being conducted, reported or published.

The study is approved by the Ethics Committee of the Faculty of Health Sciences of the University of the Free State. The copy of the research protocol will be sent to you for review as soon as it has been approved.

Yours faithfully

**MASECHABA MOLEBOHENG MORU
(M.Soc.Sc. Nursing student)**

ANNEXURE D

P O Box 4298
Maseru 104
Lesotho

10 October 2001

**The Executive Secretary
Christian Health Association of Lesotho
P O Box 1632
Maseru**

Dear Sir/madam

PERMISSION TO CONDUCT RESEARCH

I am currently pursuing a Masters degree in Nursing (M.Soc.Sc). May I kindly request permission to conduct a study in the maternity ward of CHAL hospitals in Lesotho. The study is on the use of non-pharmacologic methods of pain management by midwives during the first stage of labor. This study is done in fulfillment of the abovementioned degree.

The study is aimed at identifying non-pharmacologic methods of pain management that midwives use to help mothers to cope with the pain they experience during the first stage of labor. Quantitative data will be collected using questionnaires. Statistical analysis will be done with the help from the Biostatistic Department of the University of the Free State. Anonymity will be ensured by coding data and each respondents identify will not be revealed while the study is being conducted, reported or published.

The study is approved by the Ethics Committee of the Faculty of Health Sciences of the University of the Free State. The copy of the research protocol will be sent to you for review as soon as it has been approved.

Yours faithfully

MASECHABA MOLEBOHENG MORU
(M.Soc.Sc. Nursing student)



February 12, 2002

MRS. MORU
UNIVERSITY OF FREE STATE
SOUTH AFRICA

H\PROJ\40

Dear Madam,

**RE: APPROVAL OF YOUR PROPOSAL ON THE NON-
PHARMACOLOGICAL MANAGEMENT OF LABOUR**

Please be informed that the Ministry of Health and Social Welfare has gone through your proposal on the above mentioned study and has agreed that you can start this exercise at any time from now.

The Department of Gynaecology and Obstetrics took part in assessing your proposal so that you can report to Head of that department when you are ready.

Good Luck!!

Sincerely,

A handwritten signature in dark ink, appearing to read 'T. Ramatlape'.

DR. T. RAMATLAPENG
DIRECTOR GENERAL OF HEALTH SERVICES

CHAL

CHRISTIAN HEALTH ASSOCIATION OF LESOTHO

TELEPHONE: 312500 FAX: 310314 E-mail: Chal@lesoff.co.z

P.O. BOX 1632

MASERU 100, LESOTHO (SOUTHERN AFRICA)

18th December, 2001.

The Medical Superintendent,
ST JOSEPH'S HOSPITAL
ROMA
MASERU

Dear sir/madam,

RE: M. SOC.SC. (NURSING) MRS 'MASECHABA MORU

This note serves to introduce Mrs 'Masechaba Moru who is currently studying at the University of Free State and is doing a research on the non - pharmacologic management of women. Attached, please find a self - explanatory letter from the university.

We humbly request that you afford Mrs Moru all the necessary assistance that she needs in order to fulfill the requirement for her degree.

We believe that Mrs Moru will share the findings of the study with us and hope to benefit from such findings.

Looking forward to your co-operation.

Sincerely,



Sebina L. Mosese
DEPUTY EXECUTIVE SECRETARY.